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One-Winged "Rio" Passes His Exam with Flying Colors



Veterinarians Play Key Role in Preventing Influenza Pandemic

One Dog's Recovery from an Unthinkable Injury

A Letter from America: The National Sporting Library's 50th Anniversary



We need you!



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EXCELLENCE

In June 2004, the Kresge Foundation offered a \$1.5-million challenge for our new Teaching and Research Building if the School raises \$13 million for any School need by October 1, 2005.

To date, we have raised \$7.8 million toward the Challenge. Now, we need your help to raise the remaining \$5.2 million.

This challenge grant comes at a pivotal moment in the School's \$100-million fundraising campaign, *Building New Levels of Excellence*, and we can't do it without you.

How can you respond?

- V** Make a gift to any School need: Scholarships, building projects, Friends of the Ryan Hospital or New Bolton Center funds, faculty endowments, etc.
- V** Give appreciated assets like stocks or mutual funds—may avoid capital gains altogether and no out-of-pocket expenses.
- V** Make a multi-year pledge. All pledges count toward the Kresge goal.

Please don't delay—the goal must be reached by October 1, 2005.

To Join the Challenge, contact:

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www.vet.upenn.edu

A Message from the Dean



Alan M. Kelly

As I contemplate retirement, I find myself thinking about all the things that must be accomplished between now and next September, when I leave the Dean's Office. It's a challenging list and I shall be very busy for the next nine months; I don't intend to be a lame duck.

The first of October was selected for my retirement, as it coincides with the completion of the Kresge Challenge. Last June the School was awarded a \$1.5-million Challenge Grant from the Kresge Foundation of Troy, Michigan. The funds are for the new Teaching and Research Building, and the grant is a feather in our cap since it is the largest ever awarded by Kresge to a veterinary school—or to any academic institution in Pennsylvania. To earn the Challenge, the School must raise \$13.9 million from living donors by October 1. If we do not raise the match, we get nothing from Kresge. So, I can't afford to relax until October rolls around.

For several years now, and well before the multi-drug-resistant *Salmonella* contamination in Widener Hospital came to light, we knew that we had to initiate a major rebuilding program at New Bolton Center. Many of the Hospital buildings were built in the early to mid-sixties with a projected lifespan of 30 years. They have

served us well but are now 40 years old and in poor condition; surgery facilities do not meet code; and, if we are to progress, our isolation facilities must be replaced.

Last year we were successful in persuading the Governor's Office to insert a \$30-million line for New Bolton Center into the Commonwealth's capital budget. In light of the problems in the Hospital last summer with *Salmonella*, we employed SRG Partnership, Inc., an architectural firm in Portland, Oregon specializing in veterinary facilities design, to address the issue of biosecurity and draw up feasibility plans for a new hospital. This is now complete, and, armed with the plan, we must entreat Governor Rendell to release the funds so construction may begin. This will require work in Harrisburg, but I am optimistic we will succeed, for the Commonwealth has a very large horse population—the fourth largest in the United States. Further, the industry already provides many thousands of jobs for Pennsylvanians, and this number is destined to expand with the introduction of slot machines on racetracks in the Commonwealth. The governor needs the revenues from these slot machines for his legislative initiatives, so investing in the health of the horse is economically sound.

New Bolton Center also is woefully deficient in laboratory space; most of the faculty do not have research labs. We need to expand the Center for Germ Cell Research and Animal Transgenesis, which is doing very well, and we must provide

new facilities for infectious disease research at NBC. The ideal would be to put up a 40,000-square-foot research building, but the cost at the going rate of \$550 per square foot is prohibitive. So we are exploring the possibility of installing prefabricated lab modules at a fraction of the price. I hope to have the first of these installed before I leave office.

In Philadelphia, funding for the new Teaching and Research Building must be completed. In particular, resources are needed to make the bridge linking the new building with the rest of the School facilities usable. The bridge intersects the Quadrangle Building in the middle of the student surgery suite, so this area must be completely renovated. Due to an error in the feasibility study, this was not included in the original cost estimates for the new building.

Since I have been in the Dean's Office, the Section of Oncology has petitioned for a linear accelerator to enable them to provide adequate radiation therapy for their patients. The Department of Clinical Studies in Philadelphia also needs an MRI, at an estimated cost of \$4.3 million. We have been raising the funds for several years, and I am now enormously pleased and grateful to the Rosenthal family for a major contribution, which will make this facility a reality. It will be located in the present Ryan Hospital parking garage. I hope to see this completed as dean.

As I said, I am in for a busy time.

—Alan M. Kelly



TEACHING
RESEARCH
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EXCELLENCE

Campaign Update

Coming to a location near you!

As part of the School's \$100-million capital campaign, *Building New Levels of Excellence*, Teri L. Drean, V'02, and Catherine Cheng, V'02, joined Dean Alan Kelly last November at the California home of former Dean Robert Marshak and his wife, Margo Post Marshak, for one of the numerous dean's receptions that are taking place around the country. Plans are currently under way to hold receptions on Long Island, and in Connecticut and western Pennsylvania. Thanks to generous donors across the country, we have raised approximately \$89 million to date.





Penn Veterinary Medicine Bellwether

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Photographers
Addison Geary
Sabina Pierce

Writers
Susan I. Finkelstein
Joan Capuzzi Giresi, V.M.D.
Greg Lester
Jane Simone
Helma Weeks
Nancy West

Designer
Gary Hopkins

We'd like to hear your praise, criticisms, or comments.
Please address your correspondence to:

Gail Luciani, Editor
University of Pennsylvania
School of Veterinary Medicine
3800 Spruce Street
Philadelphia, PA 19104-6010
(215) 898-1475
luciani@vet.upenn.edu

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Letter from the editor

In the land of publishing, editors come and go with the frequency of the seasons. They acknowledge the efforts of their predecessors, and they talk of following tough acts, passing batons, and filling large shoes.

Bellwether has not had a new editor for 30 years. Editor Helma Weeks retired in August 2004 after building a Communication Office designed to meet the information needs of audiences as varied as alumni, the media, and grateful clients. She presided over *Bellwether* as it grew from a small newsletter to a magazine enjoyed by more than 8,000 readers across the world. She interviewed subjects and wrote feature articles, managed a cadre of writers and photographers, and oversaw a major redesign in 2003. Under her watchful eyes, *Bellwether* became the informative, effective publication it is today.

It is now up to me as *Bellwether's* new editor to ensure that we continue to publish a high-quality, well-designed magazine delivering content that matters to our readers. My goal is to

provide relevant information about the evolving field of veterinary medicine and to confront issues that impact us all. I hope you will look to us, either in print or online, for captivating features, informative articles, and the latest news as the School fulfills its missions of teaching, research, and healing.

You'll see changes in the months ahead. My plans for *Bellwether* include streamlining our pages, publishing four times a year, and using effective visuals to enhance our look. In addition, I want to know how you, our readers, think we can improve. I encourage you to give us feedback, and to complete the Reader's Survey you will find in our next edition.

I am tremendously excited to have this opportunity, because I believe in the incredible potential of *Bellwether*. And while I can honestly say I have a tough act to follow, I accept the passed baton and I will do my best to fill some really big shoes.

—Gail Luciani

About our cover



Photo by Sabina Louise Pierce.

When "Rio," a ten-year-old blue and gold macaw, couldn't spread her wings to their full four-foot span, Christine Phelps knew something was wrong. After all, this was Rio's favorite trick to perform for the

hospitalized children she visited as a therapy bird. In mid-May, Christine noticed a lump on the carpus ("wrist") of the bird's left wing after she had fallen from her perch. The mass seemed to grow rapidly, and Rio appeared to be in pain.

After Christine brought Rio to the Ryan Hospital, **Jelean Briscoe-Reitz, V'02**, a resident in the Special Species Clinic, had radiographs made of Rio's left wing. The bird had a large bony mass at her right carpus that indicated osteolysis (degeneration of bone tissue through disease). The mass seemed to extend up her radius and ulna bones, both of which were fractured by the mass. A biopsy revealed the tumor to be malignant. Christine's first priority was to make Rio more comfortable, so, after talking it over with the doctors, she opted to have the wing amputated.

Rio went through surgery well and was obviously more comfortable as soon as she woke up. She was dancing, singing, eating, and climbing all over **Fred Wininger, V'05**, who worked on

her case. Rio did have a bit of an adjustment period after the surgery, though. She seemed to realize something was different and would turn away whenever anyone tried to look at the surgical site. It took her a few months to spread her other wing again, but by November she was back in full swing.

"Rio has been a fantastic patient—definitely one of my favorite (her owner has willed the bird to me upon her demise)," says Dr. Briscoe-Reitz. "She was the ultimate ambassador for parrots while she was here—she stepped up onto everyone, was very friendly, and has always been a performer."

Macaws are long-tailed, brilliantly colored parrots native to Central and South America—and blue and gold macaws are among the largest and showiest. Because of their even temper, intelligence, and beauty, macaws like Rio are among the most popular pet parrots in the world. With an average lifespan of 50 years, the blue and gold macaw often will outlive its owner.

Blue and gold macaws have been seen in many countries throughout Central and South America. Unfortunately, they are currently disappearing from many areas—due largely to hunting, trapping, trade, and habitat destruction. For pets, blue and gold macaws are regularly bred in captivity.

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Dr. Sherrill Davison obtaining longitude and latitude coordinates for a farm location using GPS technology.

By Nancy West

The world is due—some say overdue—for an influenza pandemic. Based on historical patterns, pandemics occur three to four times each century on average, according to the World Health Organization (WHO). The last one took place in 1968–69.

Although Southeast Asia has reported outbreaks of avian influenza (AI) among poultry, pigs, Bengal tigers, and some humans directly involved in poultry production since December 2003, the highly pathogenic AI strains that infect people have not reached the United States. Veterinarians play a crucial role in ensuring the continued good health of humans as well as poultry flocks in this country.

“The veterinarian is all that stands in the way of an avian flu pandemic,” stated **Gary Smith, Ph.D.**, professor of population biology and epidemiology and chief of the Section of Epidemiology and Public Health. “The very best thing we can do is keep avian flu to a minimum among poultry by focusing intensely on dealing with birds that have low pathogenic avian influenza, a milder form of the disease. It’s critical to keep this milder virus under control so that it doesn’t evolve into a highly pathogenic strain that is much harder to control, carries a much higher mortality rate, and may, in some cases, be transmissible to humans.”

Pennsylvania is prepared

If avian influenza ever does reach this country, the Pennsylvania poultry industry is well prepared to control the outbreak, thanks to the efforts of the Penn School of Veterinary Medicine’s Laboratory of Avian Medicine and

**The veterinarian is all
that stands in the way of
an avian flu pandemic.**

Gary Smith, Ph.D.

Pathology. As part of the Pennsylvania Animal Diagnostic Laboratory System, the School is actively involved in eradication and control of avian influenza in the Commonwealth, which ranks third in the nation in egg production, eighth in turkey production, and boasts an inventory of 129.6 million broilers.

Working with the Pennsylvania Department of Agriculture and the poultry industry, the School has been instrumental in developing and implementing a statewide avian flu surveillance program after an outbreak of highly pathogenic avian flu among Pennsylvania poultry in 1983–84 that resulted in the destruction of more than 17 million birds at a cost of nearly \$65 million.

Veterinarians Play Key Role in Preventing Influenza Pandemic

Ensuring That Pennsylvania Is Well Prepared

Sherrill Davison, V’83, associate professor of avian medicine and pathology, leads the School’s efforts to control the disease in Pennsylvania. “We have a comprehensive strategy that includes constant education and reminders about biosecurity practices, monthly surveillance testing of blood or eggs, regular reviews and updates to our response plans, and ensuring that we have the most advanced technology in our arsenal,” she explains. “This includes Geographic Information System (GIS) technology, which is one of the most powerful weapons we have to control diseases and minimize economic loss. Our state was one of the first in the poultry industry to develop GIS.”

Mapping the flocks

Since 1998, the School has been using GIS technology to map the location of commercial poultry flocks, feed mills, processing plants, rendering plants, hatcheries, and components of the live-bird market system throughout the Commonwealth. GIS also can be used to create buffer zones around infected flocks for increasing surveillance testing or possible quarantine purposes. The School has proven the value of this state-of-the-art technology.

“In 1997, just before we began using GIS, we had an outbreak of avian flu in Pennsylvania,” says Dr. Davison. “Even though we made a quick diagnosis, it took several months and cost the

Commonwealth of Pennsylvania \$3.5 million to control the outbreak.

“In 2001, we experienced another outbreak,” she continues. “With GIS in place and fully functional, we were able to quickly identify where the flock was, where surrounding flocks were, which ones we had to monitor, and which routes trucks should use to avoid infected flocks, among many other applications. GIS gave us the ability to respond very quickly and make very quick decisions. As a result, we had the outbreak under control within one month at a cost of only \$400,000, nearly 90 percent less than the cost of the 1997 outbreak.

“Since the events of September 11,” Dr. Davison adds, “it is also important to acknowledge that GIS technology would be a valuable defensive tool in cases of agroterrorism where animal infections were deliberately introduced.”

Rapid testing

The School’s ability to respond rapidly to avian influenza got another shot in the arm in December 2004 with certification by the National Veterinary Services Laboratory to use a new real-time preliminary chain reaction (PCR) test based on technologies similar to human DNA testing used in criminal cases. The real-time PCR takes just a few hours to complete in comparison to tests used previously that take several days. “This rapid test enables us to get on top of the situation much faster and, as a result, decrease the cost of outbreaks,” notes Dr. Davison.

The need for speed

“Rapid response is absolutely critical to control the spread of a virus,” Dr. Smith emphasizes. “Having everyone involved agree to a plan of action before an outbreak occurs is essential to ensure a speedy response. If you have an effective system in place, it usually takes one week from the time the flock becomes infected to the beginning of a quarantine. If you reduce this by just one day, you can cut in half the number of flocks affected.”

Dr. Davison concludes, “The state government and the citizens of Pennsylvania benefit from our avian influenza surveillance efforts in terms of decreased costs and protection of an important segment of our food supply.” ■

Avian Influenza: Making Its Way Around the World

International trade and travel make it easy for avian influenza to hitch a ride into many countries. In the past, the virus would have taken a year to spread worldwide; now it would take just weeks, according to WHO officials.

In addition to poultry and migratory birds, exotic birds and animals can transmit the disease. “A very lucrative market exists for smuggled exotic animals in the world today,” says **Gary Smith, Ph.D.**, professor of population biology and epidemiology and chief of the Section of Epidemiology and Public Health. “With these animals, there is a high risk of transmitting the highly pathogenic strain of avian influenza.”

Dr. Smith, who is internationally renowned for his expertise in epidemiology and population dynamics of infectious diseases, cites a recent smuggling incident in Belgium. “Customs officials discovered that a Thai man had smuggled two raptors on a flight from Bangkok. He carried them into the passenger cabin in his hand luggage. The birds were found to have the highly pathogenic strain.”

The birds never left the quarantine installations at the Brussels airport and did not pose any threat to the European poultry flock. However, the veterinarian who put down the two small mountain hawk eagles subsequently developed conjunctivitis, a common manifestation of avian influenza in people; he did not acquire the full-blown influenza syndrome seen in patients in Asia. Among other precautions taken to avoid the spread of the avian flu virus into Europe, Belgian authorities launched a search for all passengers who traveled on the same flight with the eagles, and advised them to seek medical assistance immediately if they experienced any flu-like symptoms.

“In addition to concerns about human health, the transmission of avian flu is turning into a conservation issue,” says Dr. Smith. “The raptors on the Belgian flight, for example, were an endangered species. In Thailand, 83 Bengal tigers, which are also endangered, have died or been culled after an outbreak that started when the animals were fed raw infected chickens.”

The question of vaccination

The scientific community is currently considering the question of continuing to control avian influenza strictly through culling or focusing efforts on vaccination. International trade makes this a complicated issue.

“If we had a completely effective vaccination, it would be much easier to make a choice about the best way to control the disease,” says Dr. Smith. “However, if the vaccination for the low pathogenic strain is ineffective, it could allow the virus to circulate among poultry undetected and, as a result, it could evolve into a highly pathogenic type that is more dangerous. As soon as you are dealing with the highly pathogenic strain, this becomes an issue that crosses social, political economic, and political health issues because it affects trade.

“The World Trade Organization and World Health Organization allow countries to make their own decisions about vaccination,” notes Dr. Smith. “Vaccination would be effective if every country made the decision to vaccinate, but that is unlikely. Overall, we must be guided in our decisions by the health and well-being of animals, people, the economy, and trade.”

We Got By with a Little Help from Our Friends!

By Nancy West

For the past 30 years, the owners of Rigbie Farm in Darlington, Md. have turned to New Bolton Center's George D. Widener Hospital for Large Animals whenever they've needed care for one of the many Thoroughbred race horses and show horses stabled at their facilities. Last spring, it was New Bolton Center's turn to ask Rigbie Farm for help.

With the temporary shutdown of Widener Hospital looming large after an outbreak of multi-drug-resistant *Salmonella* infection, the School's sports medicine and imaging rotation was in serious jeopardy. Determined to save

being on the cutting edge, and New Bolton Center is certainly on the forefront of veterinary care.

"We were glad for the opportunity to repay them for all the times they've helped us on a moment's notice," Clark adds. "We often call with a horse that needs attention right away and they always accommodate us."

From May through August 2004, 15 students participated in four clinical rotations conducted by the School at Rigbie. "With more than 125 horses on the farm, the students got an exceptional amount of hands-on experience,"

"The people at Rigbie were extraordinarily generous with their facility and their time," **Jennifer Cohen, V'05**, comments. "They really catered to our needs and we felt fortunate to work with people who have such exceptional expertise. The learning opportunities we enjoyed went above and beyond compensating for the shutdown of New Bolton Center.

"Visiting the race track every week was definitely a highlight," she adds. "Having the opportunity to watch horses gallop alongside an incredible lameness vet, Dr. Ben Martin, was a phenomenal experience! All the students who rotated at Rigbie are so grateful to everyone at the farm and to the School's Sports Medicine faculty who worked so hard to make this wonderful rotation happen." ■



Sharon Clark and Liz Collard at Rigbie Farm in Harford County, Md.

this crucial rotation that is offered only in the summer, the Sports Medicine faculty developed an alternative academic plan, approved by **Associate Dean Jeff Wortman, V'69**, that would provide fourth-year students with an equivalent educational experience. To make it happen, they needed the help of Rigbie Farm.

Operated by owner Sharon Clark and manager Liz Collard, Rigbie Farm is a 326-acre equine care facility specializing in rehabilitation and reconditioning care, import and export quarantine, and breeding and reproductive services for a resident population of more than 125 horses and an annual transient population of more than 200 horses.

"When the folks at New Bolton Center asked if they could conduct their sports medicine and imaging rotation at our facility, we were honored," says Clark. "At Rigbie Farm, we like

notes **Dr. Virginia B. Reef**, Mark Whittier and Lila Griswold Allam Professor of Medicine and director of Large Animal Cardiology and Ultrasonography. "Sharon and Liz took a tremendous amount of time to help us find a wide range of cases for the students to evaluate. They set up permanent-use stalls in their barn for specific procedures such as ultrasound and x-ray, and they provided space for our students to make their case presentations. They even hosted a barbecue for our students and faculty at the end of each rotation, Dr. Reef adds.

Feedback from students was also positive. "We enjoyed the diverse experiences we had at Rigbie. We saw a broad spectrum of cases, conducted in-depth pre-purchase exams, observed horses exercising at a race track facility, and even witnessed some castrations!" notes **Rebecca Linke, V'05**.

It Takes a Village . . .

It took a village of many private practices, individuals, and businesses to help support New Bolton Center's George D. Widener Hospital for Large Animals during its temporary closure last spring and summer.

The Mid-Atlantic Equine Medical Center, located in East Amwell, N.J., was one facility that went above and beyond to care for sick and injured horses that might otherwise have been admitted to New Bolton Center (NBC). Mid-Atlantic was already experiencing a heavier-than-usual caseload before NBC closed in May 2004. To accommodate the overflow of horses they were treating, Mid-Atlantic decided to put a temporary tent with 15 stalls on their property. However, they faced significant challenges and expended considerable effort in obtaining the necessary zoning from the local township. Despite this, Mid-Atlantic was more than happy to help, says Peter Bousum, founder and president.

"We've looked to New Bolton for help in the past, and they've always been responsive to our needs and very gracious in accepting our patient overflow," Bousum remarks. "We were happy to reciprocate. We enjoyed working with New Bolton and look forward to our continuing relationship with them."

Growth Factors Confer Immortality to Sperm-Generating Stem Cells

By Greg Lester

School researchers have identified the growth factors essential to allowing spermatogonial stem cells—the continually self-renewing cells that produce sperm—to exist in culture indefinitely. Their findings will be presented this week in the Proceedings of the National Academy of Science Online Early Edition.

After being kept in culture for three months, the stem cells restored sperm production, and therefore fertility, in infertile mice. According to the researchers, this development will have profound consequences for future fertility therapies and provide a source of stem cells that will make it possible to modify genes from males before they are passed to the next generation. While the research was performed in mice, the researchers believe it is likely applicable to other species, including humans.

“We’ve demonstrated that a central signaling process allows spermatogonial stem cells to continually renew themselves, essentially becoming immortal,” says **Ralph L. Brinster, V’60**, professor of reproductive physiology. “For research, this opens up a wonderfully robust diagnostic system for analyzing the function of individual genes. For medicine, it opens up a new chapter in fertility medicine.”

Spermatogonial stem cells and the hematopoietic stem cells that generate new blood cells are the only types of adult stem cells that can be positively identified using functional assays. It may also be possible to convert spermatogonial stem cells to totipotent cells, capable of becoming almost any other cell type and similar to embryonic stem cells.

Whereas the female germ cell, the egg, stops dividing before birth, the spermatogonial stem cells continue to divide throughout life. According to Dr. Brinster, it is possible to modify the male germ line between generations by manipulating the spermatogonial stem cells in culture.

“If each parent in a couple carries a similar



The success of the spermatogonial stem cell culture is demonstrated by the GFP marker gene, which causes the mice to glow green under ultraviolet light.

defective recessive gene for a disease, for example, it should be possible in the future to harvest the male spermatogenic stem cells, correct the gene in culture, and implant the stem cells back into the male to produce normal sperm. The couple could then conceive a healthy child.”

Likewise, the ability to culture spermatogonial stem cells indefinitely allows for the possibility to create sperm *in vitro*, that is, without implanting the stem cells in a recipient male. The technology could be useful for correcting some types of infertility in which the testicular environment is defective.

Dr. Hiroshi Kubota, research assistant professor of cell biology,

developed the serum-free culture system that enabled him, along with Dr. Brinster and researcher Mary R. Avabock, to discover the essential ingredients that will sustain these cells. A step-by-step additive process allowed them to determine that a single growth factor, GDNF, was vital for promoting a signal-pathway that

allowed the cells to multiply in culture.

GDNF, the glial cell line–derived neurotrophic factor, was originally identified as a survival factor for neurons in the brain. GDNF was also found to be excreted by the Sertoli cells that surround and support the spermatogonial stem cells in the testes. Once added to the culture, GDNF caused the stem cells to form dense clusters and proliferate continuously.

School researchers then used a green fluorescent protein (GFP) marker gene in the cultured stem cells to identify the cells before transplanting them back into infertile mice. These mice then produced offspring that demonstrated the success of the culture system, thanks to the expression of the GFP gene that made the mice glow green under ultraviolet light.

“The identification of the exogenous factors that allow these stem cells to proliferate in culture establishes the foundation to study the basic biology of spermatogonial stem cells,” Dr. Kubota says.

Funding for the research came from the National Institute of Child Health and Human Development of the National Institutes of Health, the Commonwealth and General Assembly of Pennsylvania, and the Robert J. Kleberg, Jr. and Helen C. Kleberg Foundation. ■

We’ve demonstrated that a central signaling process allows spermatogonial stem cells to continually renew themselves, essentially becoming immortal.

Ralph L. Brinster, V’60

A Talk with Alan Kelly

By Helma Weeks

Alan M. Kelly will step down as dean of the School on October 1, 2005, after nearly 12 years, including a first year as interim dean. University President Amy Gutman said, "Alan has made a tremendous impact on the School of Veterinary Medicine and will leave the School in exceptionally strong condition. We owe Alan an enormous debt of gratitude for his extraordinary leadership and service. He has been a wonderfully creative and energetic dean and has worked tirelessly and effectively to enhance the School's reputation as the preeminent veterinary school in basic scientific research and superb clinical care. Throughout his tenure, Alan has worked successfully to solidify the School's financial base."

Dr. Kelly studied veterinary medicine at the School of Veterinary Science of the University of Bristol in Bristol, U.K. so he could "go into something like the Food and Agriculture Organization of the United Nations." That didn't come to pass as Alan came to Penn in 1962, within a month of graduating, on a National Cancer Institute fellowship. He stayed and was awarded a Ph.D. in pathology in 1967. He joined the School's faculty and was appointed assistant professor in 1968. The rest is history. Alan never lost interest in issues of food supplies, epidemiology, and food safety. This served him well when as dean he had to appeal to the agriculture lobby for support of the Veterinary School to secure its funding. He could speak convincingly to the Pennsylvania legislators about the vital support role of veterinary medicine to Pennsylvania's agriculture industry.

I sat down with Dr. Kelly recently for a conversation about his time as dean. Following are excerpts.

HW: When you became dean, the School's financial picture was bleak. Governor Casey had proposed an \$11-million budget, and then University President Hackney made some dire pronouncements about closing the School.

AMK: The University had a lobbyist in Harris-

burg who proposed this as a tactic to try to get the legislature's support. It was a very bad idea that seriously undermined faculty morale and gave the General Assembly in Harrisburg the impression that the University would sacrifice the Veterinary School to secure the University appropriation.

HW: How did you effect the change of think-



Claire M. Fagin greets Dean Alan M. Kelly after delivering the address at the School's 114th Commencement.

ing in Harrisburg and at the University level to secure stable funding?

AMK: Despite the tactics in Harrisburg, there was broad recognition in the University that the School was important. However, there were major difficulties in Harrisburg where the agricultural lobby, the School's traditional base of support, were furious with the University, and especially President Hackney, for proposing to close the School. They saw this as an example of the lack of University support for the School.

Fortunately, when I became dean, Hackney had left for Washington and Claire Fagin was interim president. Claire is a wonderful lady whom I am very fond of. On a terribly cold day in January 1994, she came with me to a luncheon in Harrisburg where we met all the leaders of agriculture in the Commonwealth. Claire was spectacular; she apologized for what had transpired, assured them that the University valued the Veterinary School, and pledged that the University would never threaten to close the

School again. The atmosphere had been icy up to this point, but Claire's statement immediately made a huge difference in changing attitudes, and she made my life in Harrisburg much easier.

In 1994, there was a general University appropriation of about \$30 million from the Commonwealth—roughly half went to the Veterinary School, and the rest went to the University. This is what Governor Casey wanted to cancel, and what legislators from throughout the Commonwealth complained about, as many had private universities in their districts that received nothing from the Commonwealth. So it was always a challenge. Incoming University President Judith Rodin rightfully decided that the University appropriation was going to be a continuing problem that soured the relations between Penn and the General Assembly and that the University would withdraw from its portion of the appropriation. She then said it was up to me and the School to apply for the entire \$30 million since the legislature was much more amenable to seeing all the funds come to the Veterinary School. So this is what we set out to do.

Then, of course, there was Matt Ryan. What an unforgettable friend and supporter of the School; we could never have succeeded without him. Matt was not the Speaker [of the Pennsylvania House] at the time; the Republicans were in the minority, and Matt was their leader.

He became Speaker in 1995 when Tom Ridge became Governor and Republicans took control of the House as well as the Senate.

HW: It looks like the climate for the School's appropriations changed with Governor Ridge's administration.

AMK: It was already improving and

continued to greatly improve with Matt Ryan as Speaker; he was immensely powerful and was respected by everyone. We also had other good friends in the House and Senate who made a real difference. There was a general recognition that we are the Commonwealth's only veterinary school, that we are a considerable asset to the Commonwealth and should be supported. It took a year or so, but with full support in Harrisburg, we gradually managed to capture the whole University appropriation.

"There was a general recognition that we are the Commonwealth's only veterinary school, that we are a considerable asset to the Commonwealth and should be supported."

Judy Rodin generously supported us throughout this transition. She has been a very good friend of the School.

One of the things I did that proved to be enormously important was to take Barry Stupine with me to Harrisburg; Barry loves politics, is very good at it, and he has street smarts that I don't have. When you are in Harrisburg, it is never entirely clear what is going on, because there are lots of agendas. Things are never what they initially appear to be and it can be quite confusing. Barry and I would drive up there at least once a week, make our visits, and on the way back try to figure out what was really happening and what we had to do next. It was a lot of fun, and Barry was, and remains, a tremendous asset to the School both in Harrisburg and on campus.

HW: When you secured funding, you also secured funding for student scholarships.

AMK: I think in about 1997 we had told the legislature that we would do this. Initially it was \$1,000 that we gave to every student who was a Pennsylvania resident. Then, as the size of our appropriation increased, it went up to \$3,500. This was part of a plan we laid out for the legislature, showing how the money would be used if the appropriation was increased. We have adhered to this plan to the letter.

HW: Has this assistance impacted the student population? Were you able to attract more Pennsylvanians?

AMK: We always try to have between 60 and 70 percent Pennsylvania students at the School. In 1997 we were losing many to Ohio as tuition was cheaper even for an out-of-state student. We have helped to reverse this trend. The scholarships were also about the level of indebtedness students had at the end of four years with us.

HW: But the debt burden still is fairly high.

AMK: In real costs it is not as high today as in 1997. There is something I am quite proud of: if you look at the years from 1997 to 2003, not only did we give scholarships to residents of Pennsylvania, we also did not raise the cost of tuition above 2.9 percent, even though the University general admission was going up by 4 to 4.5 percent. We kept tuition level increases to a minimum, more or less tied to the CPI

[Consumer Price Index], even though our rate of inflation for scientific equipment and supplies was significantly higher than that. So if you look from 1997 to 2003, and include the scholarships, tuition for residents of Pennsylvania at the School only went up 16 percent; it went up 32 percent for out-of-state residents. That's a small increase when you compare it to any other institution of higher learning in the U.S. Undergraduate tuition at Penn went up by 45 percent during the same period. So, we have held the tuition rate down as much as possible, and that helped both in-state and out-of-state students.

HW: You have worked to increase the number of V.M.D./Ph.D. students. Has the program grown enough?

who wants to go into basic or clinical research in veterinary medicine. The School puts over \$150,000 into the V.M.D./Ph.D. program per year, with the goal of increasing the program by two students a year, and now we have two Pfizer scholarships for underrepresented minorities. We are enormously grateful to Pfizer Animal Health and have recruited two outstanding minority students into the program as a result of their support.

HW: Is the program at Penn more dynamic than at other schools?

AMK: Most other veterinary schools are at land grant universities; they don't have the huge biomedical research complex that we have on our doorstep. We are very lucky.

HW: Do you think four to five students a year



Dean Alan M. Kelly, Dr. Josephine Deubler, and Gilbert S. Kahn.

AMK: It hasn't grown enough, but I am very pleased at the increase that has occurred. When we started out, we were getting one or two V.M.D./Ph.D students a year through NIH [National Institutes of Health] support of the program; I felt veterinary scientists were a disappearing breed. But Mike Atchison [director of the V.M.D./Ph.D. combined-degree program] has done an excellent job in turning this around, and I think we are now getting about five a year. It costs at least \$260,000 to educate one of these students through the V.M.D. and the Ph.D. degrees. It's an expensive program, but it is the best training in the world for somebody

is about right?

AMK: No, I would like more. There is an enormous problem in that there are not enough veterinary students going into research, and presently, there are not enough NIH grants going to veterinary graduates with Ph.D.s. I don't know where the teaching personnel will come from in the next ten to 12 years. We are not producing them. Veterinary schools are increasingly populated by basic science faculty who are not veterinarians. They bring scientific rigor to the School, but we need to have veterinarians doing research and populating both the

continued on page 12

A Talk with Alan Kelly

continued from page 11

basic science and the clinical departments.

This is particularly important in clinical departments for there are so many opportunities and so many things that can be done using animal models, but these faculty need to be competitive for NIH funding.

HW: During your deanship, research funding at the School has increased.

AMK: When I was appointed dean, sponsored research funding at the School stood at \$11.8 million, of which \$7.4 million came from the

"Most other veterinary schools... don't have the huge biomedical research complex that we have on our doorstep. We are very lucky."

NIH. Last year we secured \$25.2 million in sponsored research funding, with \$17.8 million from the NIH.

HW: Have you increased the number of faculty?

AMK: There was 112 faculty when I came in—we had approval for 116—and it is 131 today. It has not increased that much, when you think the appropriation has gone up threefold. We haven't increased the faculty because you never know from one year to the next what

the appropriation is going to be, so you try to minimize increases in fixed costs.

HW: It seems that more recruitment occurred in the basic sciences. Did you deliberately set out to increase the basic sciences faculty?

AMK: I am not sure that is correct. You have to look at the demographics of the different departments. There was more faculty coming to retirement age, particularly in Animal Biology, so there are new faculty in this department, but not more faculty. They keep reminding me of this, and I am sure they will do the same to my successor.

The other factor is that Animal Biology had space that could be renovated, whereas Pathobiology had almost no space that could be renovated for recruiting new faculty. I wanted both Pathobiology and Animal Biology to recruit faculty who, for example, had an interest related to oncology because I wanted to build a major oncology program here—we have an amazing opportunity. We have not been able to

get the veterinary molecular oncologist to lead the program that I was seeking. Karen Sorenmo, head of the Section of Oncology, has done an outstanding job at building the program. She is an excellent clinician, but we also need a molecu-



Elizabeth Moran, Dean Alan M. Kelly, and Mrs. Mark Allam at the 1997 American Gold Cup.

lar oncologist who can link the two parts of the School and fully exploit our unique opportunity in this area. This is something I regret I haven't accomplished. We tried and tried but there aren't that many candidates. ■

(Part two will appear in the next edition of Bellwether.)

Class of 2006 White Coat Ceremony

The White Coat Ceremony, a tradition from medical schools first introduced in 2001 at Penn Veterinary Medicine, was held for the Class of 2006 in the Zellerbach Theater at the Annenberg Center on December 13, 2004. Many relatives and guests of the students attended the ceremony and the reception that followed.

The ceremony marks the end of the students' training in the classroom, and the beginning of their clinical rotations, where they will apply knowledge they have learned during the first two-and-a-half years of their four-year veterinary education. The evening also marked the final time the entire class would be together formally before Commencement in the spring of 2006.

Speakers included **Dean Alan M. Kelly**; faculty members: **Dr. Narayan Avadhani**, chair, Department of Animal Biology; **Thomas J. Van Winkle, V'75**, professor of

pathology; **Gail K. Smith, V'74**, chair, Department of Clinical Studies—Philadelphia; **David M. Nunamaker, V'68**, chair, Department of Clinical Studies—New Bolton Center; **Gregg M. Arbittier, V'06**, class president; **Timothy J. Ireland, V'90**, president-elect of the Pennsylvania Veterinary Medical Association; **Jennifer A. Morris, V'99**, of the Veterinary Medical Alumni Society; and Associate Dean **Jeffrey A. Wortman, V'69**. **William T. N. Culp, V'04**, an intern at the Ryan Hospital, spoke on "Graduation and Beyond."

Sponsors of the ceremony included the Pennsylvania Veterinary Medical Association and several of its local constitu-

ent veterinary medical associations: Lehigh Valley, Suburban, and Western. The Veterinary Medical Alumni Society gave the students Penn brass pins to wear on their white coats. ■



A group of Class of 2006 students after their White Coat Ceremony: (from left) Denise Newsom, Brett Kaspers, Mariah Gentes, Jaime Griffin, P. Blair Pendley, and Kathleen Hanlon.

Photos by Addison Garry.



Photos by Addison Garry.

"Sweetie" is feeling much better after her acupuncture session with Corrina Snook Parsons, V'99 (pictured). A veterinary acupuncture clinic opened at the Ryan Hospital last October to complement traditional medical treatment for companion animals with a variety of disorders. Inset: a close-up view. Call (215) 898-4680 if you would like to schedule an appointment.



Photo by Sabrina Louise Pierce.

Santa Claus (a.k.a. Dr. Reid Groman, staff veterinarian) visits with three "cured critters" at the Ryan Hospital's Cured Critters Holiday Party on December 11. Nurses in the Intensive Care Unit created the party in 1992 to reunite with injured or sick animals they had cared for. The invitees are pets who were especially dear to the staff or who overcame overwhelming odds.

Animal Crackers

Domestic and wild animals in Sri Lanka and India seemed to sense the oncoming earthquake and tsunami that hit South Asia in December and fled to safety, *National Geographic* has reported on its website. Eyewitnesses say that, before the disaster, elephants screamed and ran for higher ground, dogs refused to go outside, flamingos abandoned low-lying breeding areas, and zoo animals rushed into their shelters and would not come out.

Although officials have documented more than 150,000 people dead across the region (as of December), relatively few animal carcasses have been found. Along the Indian coast, where thousands of people died, the Indo-Asian News service reported that buffaloes, goats, and dogs were found unharmed.

The belief that animals possess a "sixth sense"—and know in advance when the earth is going to shake—has been held by people for centuries. Wildlife experts have conjectured that animals' more acute hearing and other senses might allow them to hear or feel vibrations deep inside the planet, alerting them to approaching catastrophes long before people realize what's happening.



Thanks to a \$4-million gift made in December by a Swiss group, the Barry of the Great Saint Bernard Foundation, Switzerland's famous St. Bernard dogs can continue working at their monastery in the Alps. Over the past 200 years, the dogs have rescued 2,000 lost travelers in the mountainous region. The breed has been known to detect avalanches minutes before they occur. Their Alpine rescue missions are now aided by helicopters and heat sensors.

In October, the monks of the Great St. Bernard mountain pass in southern Switzerland, who have raised the dogs since the mid-seventeenth century, said the costs of keeping the kennels had become too high and they could no longer afford to maintain them. To save what has become a national symbol, a group of Swiss bankers and animal lovers set up a foundation to continue breeding the dogs. The group also plans to create a St. Bernard museum, set to open in 2006.

The first cloned-to-order pet sold in the United States is named Little Nicky, a nine-week-old kitten delivered to a Texas woman grieving

over the death of her 17-year-old cat. The kitten, which cost \$50,000, was cloned by using from DNA from the owner's beloved cat Nicky. The California-based company who created Little Nicky, Genetic Savings and Clone, said that by May 2005 it hopes to produce the world's first cloned dog—a much more lucrative market than cats.

Did you know that...

...Sharks are capable of two types of reproduction? Some sharks lay eggs that are called "mermaids' purses," while others give birth to live young.

...All polar bears are left-handed (or left-pawed)? They are also one of the very few mammals with hair on the soles of their feet.

...Giant Galapagos tortoises have a lifespan between 150 and 200 years?

...An elephant's trunk has 40,000 muscles and tendons?

...When opossums are "playing 'possum," they are not "playing"? They actually faint from sheer terror. ■

Three of Hearts: Ramie Carries on Family Tradition



Art courtesy of Kathy Corrigan.

Portrait of Ramie.

By Susan I. Finkelstein

Ramie is the third in her family—in as many generations—to receive a pacemaker, carrying on what some would call an “unusual” family tradition. Following her surgery on October 30, 2004, with no complications overnight, Ramie was able to go home the next day. She has been improving steadily ever since and is engaging in all the activities that were impossible for her before the pacemaker. Ramie is a ten-year-old English cocker spaniel.

Ramie's story

Right from the start, Kathy Corrigan knew Ramie was an unusual dog. Although she had

been intended as a show and brood bitch, Ramie made it clear at an early age that the show world did not make her very happy. Kathy gave up, disappointed, when Ramie was two years old. Obedience training, too, was unsuccessful. Finally, after a failed attempt at breeding, Kathy realized that Ramie was just . . . Ramie. “I realized she was never going to be what I wanted as far as showing and breeding. That’s when she became my couch potato.”

In late October 2004, Ramie started acting strangely: she did little but sleep, wouldn’t eat, and began to have problems breathing. Kathy, data coder, Sunday school teacher, and volunteer emergency medical technician, checked the dog’s lungs with a stethoscope and believed her heart sounded odd. Soon afterward, Ramie experienced what appeared to be several small seizures: tensing, falling down, and getting up again. Something was very wrong, Kathy realized, and rushed Ramie to an emergency clinic near her Folcroft, Pa. home.

Kathy brought Ramie to Penn at the suggestion of a local veterinarian who diagnosed the dog with third-degree atrioventricular block, also known as “complete heart block.” Kathy has had the same condition since she was four years old. (Kathy’s father also received a pacemaker within the past several years.)

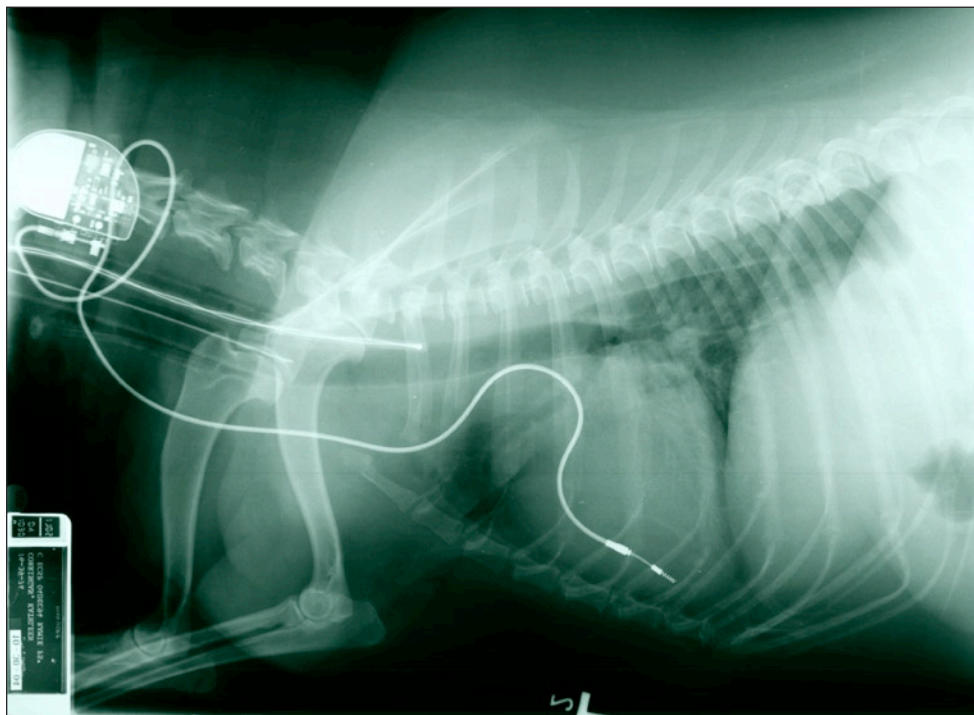
At Penn, **Dr. Steven Cole**, a cardiology resident, inserted a temporary pacemaker to increase and stabilize the dog’s slow, irregular heart rate. Because Kathy and Ramie had come

Friday night, tests to determine if the dog was a good candidate for a permanent pacemaker couldn’t be performed until the next day. Ramie had no serious underlying systemic illnesses, so Dr. Cole performed the life-saving surgery on Saturday. “I was able to pick her up Sunday afternoon!” Kathy recalls. Since then the English cocker’s health has been getting progressively better. “Ramie is doing things I hadn’t even realized she had stopped doing—going up and down the stairs without hesitation, exploring the yard, rolling on the living-room floor, and barking at the ceiling.”

Pacemakers and pets

At the Ryan Veterinary Hospital, one or two companion animals (mostly dogs, but also cats and ferrets) receive pacemakers every month. Horses can receive pacemakers also. Between 100 and 200 pacemakers are implanted into animals across the United States each year, compared to 400–500 people who receive them in the same period. Manufacturers often donate unused pacemakers to veterinary hospitals when several months have expired from the shelf-life of the device’s power source, making them undesirable for use in humans. Receiving a pacemaker powered for five instead of seven years is not an issue for companion animals, since they have much shorter lifespans than people do. (Dogs needing pacemakers—like humans—are typically older; the average age for dogs is nine years.)

Pacemakers are made up of a pulse generator and wires; the newest versions are about the size of a silver dollar, and twice as thick. The device contains an energy supply and a tiny computer that monitors and controls the heart rate. When the pacemaker senses a failure in the heart’s electrical activity, the wires send electrical impulses from the pulse generator to the heart to get it pumping at the correct rate. In animals, the pacemaker is inserted in tissue in the neck; for people, in the chest. “An incision is made in the neck, the jugular is isolated, and a wire is placed down through the vein into the heart,” says Dr. Cole. “Once the wound heals, the animal usually doesn’t even know it’s there. Owners may be able to feel it under the skin, but it should cause no problems whatsoever to the animal. We’re not truly curing the disease,” Dr. Cole continues, “but this is something that we can fix. ■



Ramie's pacemaker visible in x-ray.

Alice the Wonder Dog: One Dog's Recovery from an Unthinkable Injury

By Susan I. Finkelstein

"I named her 'Alice' because she looks like that Muppet on Sesame Street, Alice Snuffleupagus," explains Charlotte Williamson, owner of the chestnut-colored mixed-breed dog that has become kind of a star at the Ryan Hospital—and around the world! Alice's story is so extraordinary that not only have local newspapers and television stations run it, but the syndicated Associated Press story has appeared in hundreds of newspapers both here and abroad.

A Trip to York

On Friday, November 12, Charlotte drove with Alice from Washington, D.C., where she currently makes her home, to spend time with a friend on his 100-acre farm in York County, Pa. When she arrived, Alice was anxious to frolic in the open space, and Charlotte thought the dog needed some "roaming time" after the long car ride. After nearly an hour, and several calls for Alice, the 1½-year-old dog was still nowhere to be seen.

It was then that Charlotte heard faint whimpering nearby—and discovered Alice cowering under the porch, her fur matted with blood, her right eye swollen shut. "I thought her nose was broken, or that she had been bitten by another animal," recalls Charlotte. The dog was brought to a local veterinarian, who promptly recommended that Alice be taken to Penn. The cause of Alice's injury was still undetermined.

Alice Comes to Ryan

"On presentation, she had a wound on her nose and a lower jaw that shifted to the right. She was referred to us in Dentistry for a possible jaw fracture," says **John Lewis, VMD**, a lecturer in dentistry. Radiographs of the dog's head produced shocking results: part of a fiberglass arrow, about six inches long, was lodged in her skull. The three-bladed tip was a half-inch from her brain. The arrow struck her on the bridge of the nose and traveled downward, fracturing the jaw. Dr. Lewis estimates the arrow had been 30 inches long originally, and had broken off when Alice tumbled from the impact. But someone had forgotten to tell Alice what had happened: according to Dr. Lewis, "She was standing and her tail was still wagging."

Surgery was scheduled for the next day, Saturday, when few specialty services are available at the Hospital. Dr. Lewis and **Dr. Steve Mehler**, a soft-tissue surgeon, headed

a quickly assembled team from no less than seven sections (including Dentistry, Soft Tissue, Radiology, Intensive Care, Emergency Service, Anesthesia, and Transfusion Medicine) to work on Alice.

Because of its razor-sharp blades, pulling the arrow out the way it had entered would cause further injury. An incision was made on the right side of Alice's neck to pull the arrow through. After a four-hour operation, all but one piece of metal was removed; excessive swelling prevented extraction of a barb in her jaw. It would have to be taken out when the swelling receded. (On December 17, Drs. Lewis and Mehler successfully removed the third blade during Alice's second surgery.)

Recovery

"She made it through amazingly well," reports Dr. Lewis. "A couple of millimeters one way or another, and the dog would have been in much

"...And her tail was still wagging."

worse shape." One of the lingering effects of the injury, however, is chronic nasal infections for

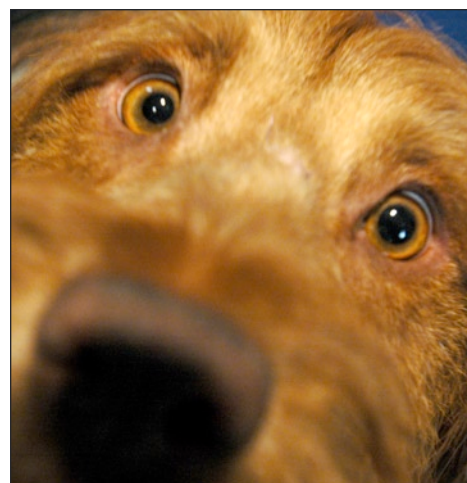


Photo by Sabina Louise Pierce.

Alice, healed from her surgery.

the dog. Another is blindness in her right eye, although a bit of improvement indicates she might eventually regain some vision there.

How the dog got shot is still a mystery. Charlotte surmises that perhaps the dog was mistaken for a fox, with their similar coloring, and was struck by a bow hunter. Of course, the possibility exists that the actual cause might be more malicious. Charlotte has kept the arrow shaft and blades to have them examined—in an attempt to determine who is responsible. ■



Broken arrow held up to x-ray after being removed from Alice.

General Guidelines and Strategies for Vaccine Use in Cats and Dogs

by Margret Casal, D.V.M., Ph.D.

Vaccinations have greatly contributed to the well-being of our companion animals. The number of patients we see with infectious diseases has decreased significantly over the past 20 years, ever since the first vaccines were available. Many of the infectious diseases are ubiquitous and are often fatal in the unvaccinated animal. Thus, the importance of vaccinations cannot be overstated. However, differences in risk of exposure to infectious diseases, age and health of the patient, and potential side effects of certain vaccines make it next to impossible to recommend one single vaccination protocol for all cats or for all dogs. Therefore, we recommend for optimal protection that each animal be examined on a yearly basis even if vaccines are not to be given in that particular year. Health and lifestyle changes can be assessed, and the animal's vaccination protocol can be adjusted if needed.

Cats

Only healthy cats should be vaccinated. For example, if an animal is presented with a body temperature that is elevated and remains above 103°F on repeated measurements, its cellular immune system shuts

down. Thus, the vaccine may not be efficacious or worse, may cause disease. Animals with immunodeficiencies or receiving chemotherapy also will not respond appropriately to vaccination. For these animals, it may be beneficial to use killed vaccines to which many are still able to respond (i.e., mount an immune response), yet the risk of causing infection as with modified live vaccines is virtually absent.

Dogs

Clients may not bring their dogs to their veterinarians if vaccines are only given every three years or if they are worried that the immunity will last less than three years. However, diseases such as leptospirosis in dogs need to be vaccinated against annually. Titers may also be measured in lieu of yearly DHPP boosters (distemper, hepatitis, parainfluenza, and parvovirus). While it is impractical and expensive to determine titers against every triennially vaccinated disease, in-house kits are now available to determine distemper and parvoviral titers in dogs, which may reflect the dog's general immune status.

Issues to Keep in Mind

Vaccination sites should **always** be recorded, in case reactions are seen later. In cats and dogs, rabies vaccines should always be given in the right upper hind limb. In cats, FeLV (feline leukemia) vaccines are given in the left upper hind limb. Other vaccines may be given on the right or left side of the abdomen. We do not recommend giving vaccines between the shoulder blades (or in the tail!) because of the poor drainage of this site.

Pregnancy: It is best to vaccinate before pregnancy. If this is not possible, killed vaccines can and should be used safely two weeks before the expected due date. Two weeks allows sufficient time for the production of antibodies, which can then be passed on to the offspring via colostral intake. However, because of the nature of killed vaccines, adverse, allergic-type reactions are more likely.

Vaccine Reactions: For the first half-hour after vaccination, owners should carefully observe their animal for signs of acute allergic reactions. In our clinic, this is about the time it takes to write up the discharges and have the Business Office prepare the bill. In case of allergic reactions, contact the clinician or the Emergency Service imme-

Canine Vaccination Protocol at the Matthew J. Ryan Veterinary Hospital								
	Neonates	Puppy Series			Last Puppy Booster	First Adult Booster	Adult Boosters	
Vaccines	2-5 weeks	6-8 weeks	10-12 weeks	13-16 weeks	16 weeks	15 months	Every year	Every 3 years
Distemper/Measles	X							
Killed Parvovirus	X							
Distemper		X	X	X	X	X		X
Canine Adenovirus Type 2		X	X	X	X	X		X
Canine								
Parainfluenza		X	X	X	X	X		X
Canine Parvovirus		X	X	X	X	X		X
Rabies Virus				X		X		X
Leptospira (optional)			X	X	X [#]	X	X	
Bordetella (optional)			X	X	X [#]	X	X	
A dog presented before 6 weeks of age that may be lacking colostrum or in case of high infectious disease risk () should be given measles virus vaccine to overcome maternal protection against distemper.								
#Because of the potential for allergic reactions, we recommend beginning with Leptospirosis and/or killed, injectable Bordetella vaccines 3-4 weeks before the last vaccine of the puppy series is given and then booster together with last of the puppy series.								

diately, treat with Benadryl® (diphenhydramine at 2–4 mg/kg TID-QID PO IM or IV) and/or short-term steroids (dexamethasone sodium phosphate for anaphylaxis at 0.25 mg/kg IV or prednisolone tablets for milder reactions at 0.5–1 mg/kg BID PO or IM). Also give the owner medication to take home for the affected animal. In very severe cases, it may be necessary to give epinephrine (0.5–1.5 ml IV of a 1:10,000 solution; repeat in 30 minutes) and life support. If an animal has had a reaction before, depending on the severity, it may be given Benadryl® one half hour before vaccination, may be kept in the clinic for 24 hours for observation, or not vaccinated at all. In cases where the veterinarian and the owner have opted not to vaccinate the animal, titers to the corresponding diseases may be measured, but keep in mind that serum titers do not reflect the actual state of local immunity.

Types of Vaccine Reactions: Vaccine reactions may be divided into different categories of hypersensitivity reactions and other side effects. **Type I** (immediate hypersensitivity) reactions result in allergy or anaphylaxis and are most commonly caused by bacterins, killed rabies, feline leukemia, and feline respiratory viruses. **Type II** (cytotoxicity) reactions may result in either

hypersensitivity or autoimmunity, such as autoimmune hemolytic anemia (AIHA) or autoimmune thrombocytopenia (AITP). The most common culprits are the modified live parvoviral (AIHA) and modified live distemper vaccines (AITP), although CAV-1 MLV has also been implicated in causing AITP. **Type III** (immune complex hypersensitivity) reactions are seen in the form of either uveitis after vaccination with CAV-1 MLV or generalized serum sickness after passive immunization. Examples of **Type IV** (cell mediated) reactions are granuloma formation after BCG immunotherapy, encephalitis after vaccination against rabies with vaccines that were derived from nervous tissue, or polyradiculoneuritis after the use of inactivated neonatal mouse brain rabies vaccines.

Other Side Effects: Other side effects of vaccines include local or systemic reactions. Local reactions at the site of injection are usually caused by adjuvants, preservatives, and inactivators found in bacterins and inactivated rabies vaccines. Modified live vaccines are intended to replicate in the lymph nodes mimicking a natural infection, but may lead to fever and general malaise. Any MLV given during pregnancy may lead to abortion in the maternal animal,

congenital malformations, clinical signs of disease, or death of the fetus/neonate. For example, giving CPV vaccines to neonates <5 weeks of age may lead to cardiomyopathy and death because the myocytes are still dividing, making them especially vulnerable to the effects of the live parvo vaccine.

Clinical signs of disease may also be seen in vaccinates after incomplete attenuation of the vaccine or local administration of attenuated vaccines (all intranasal vaccines). Postvaccinal encephalitis may result in immunosuppressed or mildly immunosuppressed animals that had received poorly attenuated vaccines and can be caused by distemper, measles, rabies, CAV-1, or canine coronaviral vaccines. Parenteral injection of intranasal vaccines may cause localized swelling, pain, fever, vomiting, mature leukocytosis, hypercholesteremia, hypoalbuminemia, and increases in serum alkaline phosphatase, ALT, and chloride, which all are due to hepatocellular necrosis. Lastly, animals may shed the modified live vaccine virus, possibly infecting an immunocompromised animal. Vaccine viruses can be spread through the gastrointestinal tract (parvovirus vaccine), through the kidneys (CAV-1), and through the respiratory tract (CAV-2). ■

Feline Vaccination Protocol at the Matthew J. Ryan Veterinary Hospital							
	Neonates*	Kitten Series		Last Kitten Booster	First Adult Booster	Adult Boosters	
Vaccines	2-4 weeks	6-8 weeks	10-12 weeks	12-13 weeks	15 months	Every year	Every 3 years
Feline Viral Rhinotracheitis (FVR)	X	X	X	X	X		X
Panleukopenia (FPV)	X	X	X	X	X		X
Feline Calicivirus	X	X	X	X	X		X
Rabies Virus				X	X	X [#]	X [#]
Feline Leukemia (optional)			X	X	X	X	
Feline Immunodef. Virus (optional)		X	X	X	X	X	
FVRCP = Feline Viral Rhinotracheitis – Calici – Panleukopenia *Give a few drops of the MLV (intranasal vaccine) in each eye and in each nostril as soon as the eyes open. Useful in catteries or during outbreaks in shelters. From 6–8 weeks on either the intranasal or the injectable FVRCP can be used. Do not inject the intranasal vaccine! #Repeat yearly if a recombinant vaccine is used.							

A Letter from America

Editor's note: In October 2004, more than 30 antique road coaches gathered in Middleburg, Va., for a weekend of pleasure driving to celebrate the National Sporting Library's 50th anniversary. This spectacular gathering, chaired by Jacqueline L. Ohrstrom (wife of the Library's long-time chairman, George L. Ohrstrom, Jr.) and George A. "Frolic" Weymouth, benefited the National Sporting Library in Middleburg. The School loaned its two Kladruby driving horses, Ricardo and

Amor, to one of the participants.

The School's Carriage Program is an important outreach and advancement tool; since its inception by Dean Mark Allam at New Bolton Center, it has taken the School's message of teaching, research, and healing to a wide variety of audiences.

Jane Simone, New Bolton Center's Director of Development, attended the event and wrote the following letter to her family in England describing the historic weekend.

Dear Family,

I'm back from Middleburg and it was quite an occasion—with coaches, horses, parties, and people! New Bolton Center had been asked to lend two Kladruby driving horses to make up a four-in-hand for a gentleman, who in turn was asked to loan a road coach to a venerable scion of the coaching world from England, Peter Munt, who has driven for HRH Prince Philip, the Duke of Edinburgh, and whose family continues the tradition of four-in-hand driving through his sons, Tony and Roy.

Only road coaches could be used—and we saw some lovely examples of the marvelous old coaches that once carried passengers all over England, with wonderful names like Tantivy, Nimrod, the Boar, and Old Times. Road coaches could hold as many as 14 people, and needed a team of four horses to pull them.

Harry J. Tucci, our host and owner of the coach our horses were to help pull, has a spectacular collection of carriages and coaches on his farm in Pennsylvania, and had entered two road coaches in the Middleburg drive. The coach we

rode, known as a Park Drag, was built by Million Quiet & Co. of Paris in 1873. It was displayed at the 1876 Centennial Exposition in Philadelphia, and is painted dark green and black, with vermillion trim—quite



Peter Munt takes Harry Tucci's 1873 Quiet Park Drag through a gate en route to Llangollen Farm, Va. New Bolton Center's greys are Amor (front/left) and Ricardo (right/rear). Photo by Alix Coleman.

the thing to be seen in on a Sunday drive through the park!

Three days' driving was planned, beginning Friday, October 22. The coaches were divided into three groups of 10 or 11, because it takes quite a while to get so many coaches on the road. The going was also very heavy—lots of rain had left deep,

squishy mud.

We were in the second group, but one of our "wheel" horses threw a hissy fit and would not go. Embarrassingly enough, it was one of the School's horses—but along for the ride was Bruce Rappoport, New Bolton Center's Associate Dean, who heads our carriage program. He reckoned the horse's bit needed to be changed, which meant unhooking all four horses! Cardinal safety rule: never leave a horse in the traces unless he is fully harnessed and bridled! We were marginally delayed, because our horse's tantrum had upset the other horses, and they all needed to be soothed. But we finally got going, parading through the grounds before heading down the road.

I was fortunate to be sitting behind the Whip, Mr. Munt, and next to his son, Tony, also an experienced coachman. He operated the coach's brake, and I felt very glad of this before too long. I was able to listen to the fascinating chat between father and son. Mr. Munt knew two of the horses well, as they had once belonged to him. It was such fun to hear them talk about how the horses were going, which one was working and which was slacking off, and when to use the brake and the whip. Coaches stretched ahead as far as the eye could see, and behind as well. Our team was a mix of greys and bays, arranged in checkerboard formation.

Shortly into the drive, we descended a very steep hill, and I was a tad nervous, as our horses did not seem to be staying in an orderly line. We were perilously close to the vehicle in front (expressions of rank alarm could be seen on the faces of its passengers!), doing a bit of erratic weaving. In addition, very steep ditches lined each side of the road. A couple of times our wheels slid off the hard

top and into the soggy ground; I had visions of the coach toppling sideways into the ditch! I was calculating how best I could bail out, sandwiched as I was between two substantial gentlemen, particularly as our horses were getting more and more fussed.

Our two capable grooms (one a nursing assistant at New Bolton Center) jumped down and went to the horses' heads to calm them (great credit to them, as both young ladies are very

petite). Apparently, one of our brake shoes had no contact with the wheel, so when the brake was applied it caused the coach to side slip. The horses tried to compensate for this, giving us a very erratic wake! All's well that ends well, however,

and the rest of the drive went off very pleasantly—although I was frozen in the damp, cool weather. Thinking of how passengers traveled 150 years ago, in the “golden age” of stage coaches, made me appreciate the value of voluminous skirts, warm wraps, and cosy bonnets.

Saturday's weather was much kinder. The day's drive included a stop at a lovely farm called Llangollen, which reputedly appears in “Gone with the Wind” and is very close to the “hidden White House,” where the President takes refuge in national crises. It was a little surreal to drive a coach and four through the gorgeous Virginia countryside, dotted with elegant mansions and farms, and to see in the

side of the hillside what looked like great concrete bunkers. Overhead, a helicopter circled endlessly—presumably routine security.

A sumptuous champagne lunch followed, under a tent on the sweeping lawns of Llangollen. Seeing 31 road coaches with their four-in-hand teams ranged across the parkland of this antebellum mansion was quite magnificent! As we departed, the long line of carriages was to “pass in review” up the driveway. This

let us know of his dissatisfaction by kicking out at the splinter bars behind him. After some sizeable whacks, he reared on his hind legs and nearly went over his traces, which would have been very dangerous. Our tiny little groom managed to get him down safely, at which point Mr. Munt said quietly, “Get these ‘osses going! Safety first!” Bad etiquette, but good judgment. A coach behind us had a similar problem, and indeed, one of their lead horses fell down on the road. This was very alarming and looked appalling, but we later learned that everything was

safely resolved and the foursome got home, coach intact.

The day ended with a ball at a participant's Virginia estate. His indoor riding arena was transformed into an enchanted autumnal grotto, with paper lanterns hanging from the rafters, huge sheaves

of corn delineating the dance floor, and tall vases of roses—1,800 of which had been flown in from Colombia that morning—decorating each table. Quite an extravaganza.

I'm so looking forward to reading about this magnificent event in the carriage and driving magazines. It was a privilege to be part of it, and to be the guest of such a generous host, Mr. Tucci. Hope you have enjoyed reading about this memorable chapter in New Bolton Center's carriage driving history!

Love,
Jane



Road coaches that participated in the National Sporting Library's driving weekend in Middleburg line up at Llangollen Farm. Photo by Alix Coleman.

meant the lead coach pulled off to the side to watch all others go by, the second coach did likewise, then the third, and so on. The lead coach would see all the vehicles pass, then would pull out and take up its lead position again, followed by the rest in correct order.

This was the humans' plan, of course. The horses had other thoughts about it! Having stood quietly for more than an hour while we ate and drank, all they wanted to do was Get Going! So this process got quite a few of them worked up—ours included. Oh dear, another embarrassing moment for the School. After we pulled over, one of our lead horses took exception to the stop. He

Gustavo Aguirre, V'68, professor of medical genetics and ophthalmology, was named Scientist of the Year by the Heart Sight/Foundation Fighting Blindness, Hollywood, Fla., on September 18, 2004. He was also awarded the ONCE International Prize for Research and Development in New Technologies for the Blind, Madrid, Spain, on December 1, 2004. Dr. Aguirre gave the Memorial Lecture at a meeting of the American College of Veterinary Ophthalmologists, Washington, D.C., October 2004.

Joan Hendricks, V'79, Henry and Corinne R. Bower Professor of Animal Medicine, was elected to the vice presidency of the Pennsylvania Veterinary Medical Association in October. The position is effective January 1, 2005.

Ms. Laura Florence, farrier at New Bolton Center, was named Special Research Fellow of the Dorothy Russell Havemeyer Foundation for 2004–2006. This appointment supports ongoing research of the hoof growth and natural trim cycle of the semi-feral equid. The goal of the study is to systematically describe equine hoof growth and wear characteristics under natural environmental and social conditions, using the semi-feral herd at New Bolton Center as one model.

Dr. Darryl Biery, emeritus professor of radiology, has been elected president of the International Veterinary Radiology Association.

Dr. Bernd Dreissen, assistant professor of anesthesia, and colleagues presented the abstract “Submucosal microcirculatory blood flow and oxygen tension in an equine large colon torsion model” at the 14th Annual Veterinary Symposium, October 2004, Denver. Dr. Dreissen; **Lawrence R. Soma, V'57**, professor of anesthesia and clinical pharmacology; **Dr. Cornelius Uboh**, adjunct assistant professor of pharmacy and pharmacology; **Dr. Jinping Luo**, post-doctorate in reproduction; **Mr. Peter Moate**, research coordinator, Section of Biostatistics; and a colleague presented the abstract “Pharmacokinetics of hemoglobin-based oxygen carrier hemoglobin glutamer-200 bovine (Oxyglobin®) in the horse” at the American

College of Veterinary Anesthesiologists Annual Meeting, Phoenix, October 2004. Dr. Dreissen; **Dr. Patrick Burns**, resident, large/small animal anesthesia; **Dr. Ray Boston**, professor of applied biomathematics; and associates presented the abstract “Pre-hospital low volume resuscitation with hemoglobin-glutamer-200 (Hb-200) in a canine hemorrhagic shock model” at the American College of Veterinary Anesthesiologists Annual Meeting, Phoenix, October 2004.

Dr. Deborah Silverstein, adjunct assistant professor of critical care, provided six hours of lectures at the International Veterinary Emergency and Critical Care Symposium, San Diego, September 2004, and four hours of critical-care lectures at the American College of Veterinary Surgeons Surgical Summit in Denver in October.

of the American College of Veterinary Surgeons, Denver, October 2004. He also gave a presentation and lab at the 13th European Congress of Veterinary Dentistry, Krakow, Poland, October 2004. He was awarded the EVDS/EVDC European Veterinary Dental Award (principal investigator) on October 22.

Dr. Alan Klide, director, Anesthesia Services, lectured at the Department of Anesthesiology, Yale School of Medicine in October. His topic to residents was “Veterinary anesthesiology: the Penn way,” and at Anesthesiology grand rounds it was “Veterinary anesthesiology: from aardvark to zebra.”

Dr. Zhengxia Dou, associate professor of agricultural systems, gave invited talks at the symposium “Partnering for Enhanced Research” by the Council on Food, Agricultural, and

Resource Economics, Washington, D.C., and at the 3rd International Nitrogen Conference, Nanjing, China. Dr. Dou also was recently appointed

Rosettes & Ribbons

some recent accomplishments of note at the School

The American Veterinary Dental College (AVDC) Outstanding Candidate Award for 2004 was presented to **John R. Lewis, V'97**, lecturer in dentistry, at the 18th Annual Veterinary Dental Forum, Fort Worth, Texas, September/October 2004. The award recognizes a highly qualified and productive veterinarian who has passed the credentials review process and is now eligible to take the AVDC entry examination in March 2005.

Also at the 18th Annual Veterinary Dental Forum, the Academy of Veterinary Dentistry Grant Award for 2004 was presented to **Dr. Alex M. Reiter**, assistant professor of dentistry; **Dr. Jen Rawlinson**, resident in surgery; and **Dr. Colin Harvey**, professor of surgery and dentistry, for a study entitled “Assessment of associations between microalbuminuria and feline dental/periodontal disease.” Dr. Reiter and Dr. Lewis each gave four presentations during the forum; Dr. Harvey gave three; Dr. Rawlinson gave two; and **Ms. Bonnie Miller**, dental hygienist, and **Ms. Jodi Kristel**, dental technician, each gave one.

Dr. Reiter gave two presentations and one lab at the 39th Annual Scientific Meeting

adjunct professor at China Agriculture University; she gave serial talks on animal agriculture sustainability and environmental challenges at the College of Natural Resources and Environmental Sciences, Beijing, China.

Dr. Gary C. Althouse, associate professor and chief, Section of Reproduction, was awarded a grant as the principal investigator of the study “Effects of bacteriospermia and extender composition on extended pig semen quality” by the Pennsylvania Department of Agriculture, 2004–2006.

Dr. Ina Dobrinski, associate professor of reproduction, presented “Germ cell transplantation in domestic animals” at the 2004 International Young Scientist Forum on Modern Reproductive Biology & Biotechnology, the 30th Forum of Engineering and Technology, sponsored by the Chinese Academy of Engineering, Inner Mongolia University, Huhhot, Inner Mongolia, China. Dr. Dobrinski presented “Transplantation of germ cells and testis tissue” at the State Key Lab of Reproductive Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Dr. Dobrinski gave a talk, "Transplantation of germ cells and testis tissue: A window into spermatogenesis," at the Texas A&M University last year. She also presented "Advances and applications of germ cell transplantation" at the Annual Meeting of the British Andrology Society, Lincoln, U.K., November 2004.

The Provost's Staff Conference, at their October 2004 meeting, approved **Dr. Dorothy Brown's** promotion to Associate Professor of Surgery, C.E., effective July 1, 2004.

Mr. Lawrence E. Nann, anesthesia technician supervisor at New Bolton Center, presented a paper, "Sevoflurane anesthetized horses are likely to require less hemodynamic support than isoflurane anesthetized horses," at the fall meeting of the Association of Veterinary Anesthetists, Vienna, Austria, September 2004. The paper, accepted for publication in *Veterinary Anesthesia and Analgesia*, was coauthored by **Dr. Bernd Driessen**, **Ms. Robin Benton**, **Dr. Ray Boston**, and Mr. Nann.

Mark Haskins, V'69, professor of pathology, presented the keynote address at the Eighth Congress of Laboratory Animal Science in Nanchang, China: "Intravenous retroviral gene therapy in dogs and cats with mucopolysaccharidosis."

Dr. Allison Zwingenberger, lecturer in radiology, became a diplomate of the American College of Veterinary Radiology and the European College of Veterinary Diagnostic Imaging.

Dr. Wilfried Mai, assistant professor of radiology; **Rob McLearn, V'96**, adjunct professor of radiology; **Dr. Victoria Johnson**, lecturer in radiology; and **Drs. Jennifer Reetz**, **Ana Caceres**, and **Mathieu Spriet**, residents in radiology, attended the annual conference of the American College of Veterinary Radiology in Montreal, Canada. **Dr. Johnson** presented a paper entitled "High resolution computed tomography of the normal canine lung," and Dr. Spriet presented a poster entitled "Validation of a 40 MHz B-scan ultrasound backscatter microscope for the evaluation of osteoarthritic lesions in an animal model."

Drs. Erin Paster, PennHIP scholar; Darryl Biery; and **Gail Smith, V'74**, professor of surgery, and chairman, Department of Clinical Studies, Philadelphia, presented a poster entitled

"Ununited medial epicondyle: diagnostic accuracy and prevalence in a cohort of Labrador retrievers" at the annual conference of the American College of Veterinary Radiology in Montreal, Canada.

Drs. Gabi Seiler and **Tobias Schwarz**, assistant professors of radiology; Victoria Johnson and **Yael Porat-Mosenco**, lecturers in radiology; and **Jennifer Kinns**, resident in radiology, attended the annual conference of the European Association of Veterinary Diagnostic Imaging, Ghent, Belgium, September 2004. Dr. Porat-Mosenco presented a paper entitled "Optimizing CT scanning protocols by reducing artifacts." Dr. Kinns presented a paper entitled "MRI evaluation of penetrating lesions of the equine foot" and received a travel scholarship to attend this meeting. Dr. Schwarz was invited as keynote speaker and for didactic courses entitled "Airway computed tomography in small animals" and "Artifacts in computed tomography."

Drs. Seiler and Johnson were invited to give a two-day course in "Small animal abdominal ultrasound" at Harcum College in Bryn Mawr, Pa. in November 2004.

Dr. Roselyn Eisenberg, professor of pathobiology, was elected a fellow of the American Association for the Advancement of Science, Fall 2004.

Dr. Eisenberg was an invited speaker at the University of Colorado School of Medicine on September 9, 2004, and presented "Herpes simplex virus entry: opening the black box."

Dr. Eisenberg was notified in October 2004 that her Co-PI of NIH grant AI-18289 "Herpes simplex virus glycoprotein" was approved. She is also a 2004–2007 Permanent Member, Virology A Study Section, NIH.

Dr. Charles Vite, assistant professor of neurology, spoke in December 2004 at Neurology Grand Rounds at the Hospital of the University of Pennsylvania regarding his research on the therapy of inherited central nervous system disease in dogs and cats.

The Heart, Lung, and Blood Institute extended the funding of the RO-1 grant of **Dr. Leszek Kubin**, research professor of physiology, "Premotor control of upper airway and REM sleep atonia" for years 12–15, December 2004 through December 2008.

Dr. Pamela A. Wilkins, chief, Section of Critical Care/Anesthesia, assistant professor of medicine;

Raymond W. Sweeney, V'82, associate professor of medicine; and a colleague presented the research abstract "Acyclovir pharmacokinetics in the horse" at the Veterinary Emergency and Critical Care Society Annual Meeting, San Diego, September 2004. It was also the American College of Veterinary Emergency and Critical Care 2003 Research Award Abstract Presentation.

Dr. Wilkins; Dr. Sweeney; **Dr. Jonathan E. Palmer**, associate professor of medicine; and a colleague presented a research abstract "Measurement of endothelin-1 concentration in oxygen dependent and non-oxygen dependent clone calves, their surrogate dams and their fetal fluids, at birth" at the Veterinary Emergency and Critical Care Society Annual Meeting, San Diego, September 2004.

The research abstract of Dr. Sweeney and a colleague, "Treatment of a premature elephant calf," appeared in the Proceedings of the International Elephant Research Symposium, Dallas, December 2004.

Dr. Sweeney also presented the following papers: "Gastric and duodenal ulceration in the critical neonate," "So what now? Problems commonly seen in foals following dystocia," and "It's not over yet. The bleeding mare: Case presentations and discussion" at the International Veterinary Emergency and Critical Care Society, San Diego, September 2004; and "Treatment of a premature Asian elephant calf" at the International Elephant Research Symposium, Fort Worth, Texas, December 2004.

Chick Weisse, V'98, lecturer in surgery; **Dr. Daniel Hume**, lecturer in medicine; **Dr. Allyson Berent**, resident in medicine; and colleagues presented "Palliative stenting for malignant obstructions in a dog, cat, and ferret" at the 14th Annual American College of Veterinary Surgeons Veterinary Symposium, Denver, 2004.

Dr. Philipp D. Mayhew, lecturer in surgery; **Robert W. Richardson, V'01**; **Dr. Stephen J. Mehler**, resident in surgery; **Dr. David E. Holt**, chief, Section of Surgery, associate professor of surgery; and Dr. Weisse presented "Choledochal tube stenting for decompression of extrahepatic biliary obstruction in dogs" at the 14th Annual American College of Veterinary Surgeons Veterinary Symposium, Denver, 2004. ■

Special Gifts to the School

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in memory of a special pet:

Shauna and James Abbott in memory of “STRIPES”
Barbara A Andrews in memory of “ASPEN”
Beth Andrews and David May in memory of “MILO”, “LUNA”, “BU”, “MOOKIE” & “SPIKE”
Hillary H. Baker in memory of “BUNNY”
Ms. Regina Berard in memory of “EMMY”
Mr. and Mrs. James R. Brower in memory of “RAGS-AZZY” & “TIFFY MARIE”
Nancy Caruso in memory of “OTTO”
Christine Connelly in memory of “CAESAR”
Doris Weyl Day in memory of “TIGER”
Rev. Douglas W. Dempster in memory of “NOELLE”
Teresa A. DeMusis in memory of “MISHA”
Sharon J. Dicker in memory of “WINSTON”
Marceline Geibel in memory of “WINNIE”
Stacey Goldstein in memory of “WILLIE”
John K. Harris, Jr., Esq. in memory of “MADDIE”
Norma and Edwin Hoglander in memory of “COCO”
David McB. Howell in memory of “BEAU”
Mr. and Mrs. Herbert Kaufman in memory of “SKYLAR”
Marcy Kjeldsen in memory of “ISABELLA”
Joseph and Carol Kopaczewski in memory of “SCHNAPPS”
Drs. Thomas S. Kube and Joseph E. Thompson in memory of “RIGHT”
Joshua E. Liss in memory of “LIZZIE”
Thomas and Jennifer Lofgren in memory of “PITA”
Joan Lutz in memory of “PITA”
Mr. and Mrs. Gerald I. Magid in memory of “SAM”
Mrs. Sara L. March in memory of “HARLEY”
James A. McMillan in memory of “ROCKY”
David and Barbara Mealmaker in memory of “BUNNI” & “ZIMA”
James L. Miller in memory of “RICK”
Mr. and Mrs. Ronald S. Murphy in memory of “LUCKY DOG”
Patricia Ann Nardini in memory of “KELLY” & “CHELSEA”
Patti O'Neill in memory of “RUSTY”
Henry E. Orysieck in memory of “WILLEM VAN ORANGE-NASSAU”
Carmen and Virginia Patrizio in memory of “HANZ” & “CLEO”
The Patt Veterinary Hospital, LTD. in memory of “PEACHES”
Betty and John Prisendorf in memory of “Teddy Bear” & “K.C.”
Mr. and Mrs. Arthur Reale in memory of “BABY”
Carol Rowehl and John Kahler in memory of “NIKE”, “MOLLY” & “ASHLEY”
Linda Rowan in memory of “Charlie”
Susan Samlin in memory of “MAXINE”
Colleen Schoell in memory of “ROXY”
Paul J. and Naomi Schoff in memory of “PIPER” & “CASEY”
Wayne and Phyllis Sheely in memory of “JAZZMIN” & “MAX”
Arleen M. Sheridan in memory of “WINSTON”, a loving friend and true terrier
James J. Sheridan in memory of “MURPHY”, a true friend and boon companion
Barry L. Simon in memory of “BEN”
Judy Taylor in memory of “BUFF”, “MAX”, & “BLANCO”
Mr. and Mrs. John R. Teti in memory of “JACKSON”
Mr. and Mrs. Larry A. Thaxton in memory of “RAVEN”
Mr. and Mrs. Kevin Thibeault in memory of “LADY BUG”, “KOKE” & “SKIPPY”
Sarah H. Thompson in memory of “DILLON”
Russell Tyhanic in memory of “HOOVER”
Sylvia Young in memory of “TAJ”

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in memory of those listed:

Lee and Arlene Bartolett in memory of Jerry Pines
Mr. and Mrs. Alfred Cavallaro in memory of Rosina Cavallaro
James and Marian Mills in memory of Matthew J. Ryan

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in memory of Marion Cronkright:

Ralph E. and Judith H. Boston

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in memory of Patricia Pepper-Hiscox:

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Elaine V. Squier
Michele L. Trampe

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in honor of a special pet:

Antoinette M. Armstrong in honor of “NATASHA”
Mary Elizabeth Beck in honor of “HOLLY”
Paul and Debra Cope in honor of “MITSY”
Mr. and Mrs. Joseph R. Hlatky in honor of “BUDDY”, “LUCY”, “EMMA”, & “DRACO”
Tammy James in honor of “RIDLEY”
Mr. and Mrs. W. Millhollen in honor of “NUTMEG”, “HERSHEY” & “MAGAR”
Sunil and Angela Patel in memory of “SCOUT”
Nancy Boyd Ray in honor of Tomara's American Cocker Spaniels
Kirk A. and Bernadette M. Rebane in honor of “SALTZWATER MARY”
Shannon and Derek Rittberg in honor of “ZOE” & “COOTY”
Erich H. Rutscheidt in honor of “CH. KATAHDIN PRINCE OF TIDES, UD”

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in honor of those listed:

John R. Burchill in honor of M. Conkright
Margie Davidson in honor of Jackson Corelli
Carl and Roxanne Deinhardt in honor of Rosie's 15th Birthday
Mrs. John B. Hannum in recognition of Dr. Alan M. Kelly
Diana D Heide in honor of Peter van Berlo Heide
Helen Hiller in honor of Dr. Susan Jacobson
Susan E Hoaglund in honor of Saine Hsu
Tammy James in honor of Dr. Weisse
James Koch and Karen Bossert in appreciation of Dr. Chick Weisse and Dr. Tona Melagerajo
Edward M. Resovsky in honor of Dr. Alan M. Kelly
Mr. and Mrs. Larry A. Thaxton in honor of Dr. Jay Koch
Joanne Weaver in honor of Susanne Weaver

The following have made gifts to the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania in memory of Kenneth R. Yeager:

Charles and Pauline Albert, Sr.
Paul Albert
American Legion Catasauqua Post No. 215
James and Debra L. Berresford
David and Shelly DeLong
Charles and Linda Durbach
Shirley Greb
Ruth M. Herman
Phyllis and Edward Jacksits
Willard and Irene Keller
Leonard and Evelyn Miller
Colleen M. Monaghan
Barbara A. Nicholas, Anna Nicholas, & Harold Benner
Eugene and Joan O'Donnell
Bruce A. Schoenberger
Telecom Pioneers Greater Allentown Pioneers Chapter # 38
John N. and Anna M. Tumini
Alan and Lisa Yeager
Rita Yeager

The following have made gifts supporting the Clinical Studies Research Development Fund in memory of a special pet:

Ken and Anne Luongo in memory of “KOSHKA”
Carol J. McClosky in memory of “SHEEBA”
Nancy Sullivan in memory of “RIGHT”
Joseph V. and Patricia M. Summers in memory of “SPARKY”

The following have made gifts supporting the Clinical Studies Research Development Fund in honor of a special pet:

Ken and Anne Luongo in honor of “FUZZY” & “BOO BOO”

The following have made gifts supporting the Ophthalmology in honor of those listed:

Martha and Thomas Stear in honor of Dr. Elaine Holt

The following have made gifts supporting the Examination Room in honor of Dr. Meryl Littman:

Ms. Patricia Burdette
Jana L. Carraway
Coyote Hills Kennel Club, Inc.
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Cynthia Hollis-French
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Gary and Suzanne S. Stone
Mark and Marie Wyzgala

The following have made gifts supporting Dr. Meryl Littman's Soft-Coated Wheaten Terrier Open Registry in honor of Dr. Meryl Littman:

Betty A. Faust
William and Nona Mansfield

The following have made gifts to the Special Species Clinic in memory of a special pet:

Amy L. Boyd in memory of “FLANNELS”

The following have made gifts supporting the Kidney Transplant Program in memory of a special pet:

Robert and Angela Fallat in memory of “DAISY”

The following have made gifts supporting Canine Hemangio Sarcoma in honor of a special pet:

Dr. Christopher Anastasiou in honor of “LUCKY”

The following have made gifts supporting Canine Hemangio Sarcoma in honor of those listed:

Dr. Christopher Anastasiou in honor of Dr. Erika Reineke

The following have made gifts supporting the Radiation Therapy Facility Fund in honor of those listed:

Judith L. Allison, Ph.D. in honor of the people in the Oncology Department

R. K. Mellon Family Foundation in honor of Dr. Henry Croft

The following have made gifts supporting Oncology Research in memory of a special pet:

Dennis and Elizabeth Berger in memory of “AMBER”

Mr. and Mrs. Mark D. Blasko in memory of “BAILEY”

Catherine Ciric in memory of “BU” & “MOLLY”

Cornelia Schlotter in memory of “BAGGY BEAR”

The following have made gifts supporting Feline Care in memory of a special pet:

Paul and Ellen Seymour in memory of “BUTTONS”

The following have made gifts supporting the Immune Deficiency Research in memory of a special pet:

Dale and Linda Kuhn in memory of “ANGEL GIRL”

The following have made gifts supporting Dr. Naomi Hansen Clinical Research in memory of a special pet:

Geralyn M. Meny in memory of “MAGGIE”

The following have made gifts supporting Oral Melanoma Research in honor of those listed:

Carol Nevulis in honor of Drs. David Holt and Katherine Skorupski for the care of “MR. MURPHY”

The following have made gifts supporting Dr. Chick Weisse’s Surgery Section memory of a special pet:

Dennis and Virginia Coffey in memory of “BAILEY”

The following have made gifts supporting the Behavior Clinic in memory of a special pet:

Robin Resnick in memory of “BASIL”

The following have made gifts supporting Dr. Karen Rosenthal in honor of a special pet:

Karyn Roark in honor of “ADAIR,” “DJ,” “SNEEZIE,” & “SARAH”

Kindy French contributed gifts in support of Dr. Michael Goldschmidt in honor of those listed:

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Marsha Finkelman

Dr. Michael Goldschmidt

Dr. Colin Harvey

Dr. Meryl Littman

Dr. Paul Orsini

Dr. Karin Sorenmo

Dr. Jeffery Wortman

The following have made gifts to the Dean’s Discretionary Fund in memory of those listed:

Edwin J. Andrews, V.M.D. in memory of Ethel Carruth

John J. Coyle in memory of Darrell G. Nelson

Ellen McDermott in memory of Wallace J. Stuart

Susan A. Thomas-Holder in memory of Rev. Oscar E. Holder

The following have made gifts to the Dean’s Discretionary Fund in memory of a special pet:

Ronald L. Bomberger in memory of “WEE BONNIE NIBBY NOSE”

Margaret Coyle in memory of “EMMY” & “KONUK”

Mr. and Mrs. Dennis R. Demarest in memory of “EDDIE CAT”

Alexis M. DiGrazia in memory of “FLUFFY”

Edna R. Fleer in memory of “JENNY” & “SEMMY”

Amy Pifer Leonard in memory of “SADIE”

James and Glenda McDonald in memory of “JOSH”

Louis G. Rubino in memory of “PATSY”

The following have made gifts to the Dean’s Discretionary Fund in honor of those listed:

Warren and Carolyn Clein in honor of Dr. Shellie Anderson and her staff

Donald A. Marcus in honor of Herbert and Ben Marcus

Bruce Schmucker, V.M.D. in honor of Patricia B. McQuiston, V.M.D.

Jay J. Simmons in honor of Madeline Zingle’s acceptance into Wharton

The following have made gifts to the Dean’s Discretionary Fund in honor of a special pet:

Ronald L. Bomberger in honor of “WEE BONNIE NIBBY NOSE”

Warren and Carolyn Clein in honor of “DAISY”

Yvonne C. Ehrhart in honor of “DIXIE”

Mr. Clark MacMullen in honor of “SOOTY” 16th Birthday

The following have made gifts to the Humanitarian Fund in memory of those listed:

Dorrance Elder Dean in memory of John W. Beck, V’51

The following have made gifts to Veterinary Student Scholarship in memory of those listed:

Richard B. Bankert, V.M.D. in memory of Esther Schoenberg

Joseph H. Groveman, V.M.D. in memory of Mervin D. Groveman, V.M.D.

Mr. and Mrs. Thomas Licorish in memory of Dr. Daniel Burnside

Tracy H. Wynder, V.M.D. in memory of Peter Dubovick

The following have made gifts to the Veterinary Student Scholarship Fund in memory of Elmer B. Kipp, V.M.D.:

Mr. and Mrs. John Houghton

The following have made gifts to the Veterinary Student Scholarship Fund in memory of those listed:

Alex Koprowski in honor of Harold and Dorothy Gustafan, Hilary and Irena Koprowski

Mr. and Mrs. Paul J. Schoff in honor of Dr. Charles Vite

Janine Stoyko in honor of JoAnne Hangen & Kevin Varano

The following have made gifts to the Veterinary Student Scholarship Fund in memory of a special pet:

Dr. Carolyn Carruth Rizza in memory of “CRICKETT”

Nancy L. Roth in memory of “TOBE”

Mr. and Mrs. Parker M. Seymour in memory of “OBIE” & “CLYDE”

The following have made gifts to the Class of 1937 Endowed Scholarship Fund in memory of Russell Edmonds, V.M.D.:

Betty Jane Tingley

Roger and Margaret Wines

The following have given to the New Teaching and Research Building “Take a Seat” fund in memory of Kathleen Mary Aucamp:

Robert and Carol Black, Jr.

Ms. Patricia A. diPietrae

Carole Hammond

LeAndra A. Marcelle-Thompson

Maureen McGrath

Virginia J. Perry

Jennifer D. Shaw

University of Pennsylvania School of Veterinary Medicine
Class of 2007

The following have made gifts to the Josephine Deubler Scholarship Fund in memory of those listed:

Mr. and Mrs. T. A. Deubler in memory of Dr. James A. Deubler

The following have given to the New Teaching and Research Building in memory of those listed:

Max and Paula Rose in memory of Amy Bogdanoff

The following have made gifts to the New Teaching and Research Building in honor those listed:

Dr. Leon P. Weiss in honor of Dr. Alan Kelly

THE FOLLOWING MEMORIAL OR HONORARY GIFTS WERE MADE TO FRIENDS OF NEW BOLTON CENTER:

In honor of a special person:

Dr. Carol Ann Dolinskas in honor of Dr. Mark Donaldson

Jerre Frankhouser in honor of Edward Mersky, V.M.D.

Priscilla A. Green in honor of Dr. Beth Kraus

In memory of a special person:

Gretchen Truby Duce in memory of Wilbert Etter

Philip J. Murray in memory of Joseph I. Fineman

Unionville Equine Associates in memory of Judith Hickman Mooney

In honor of a special animal:

Eileen M. Corl in honor of Wiley’s Claddagh “CLOVER”

Carolyn DiArcangelo in honor of “WILLIE,” the goat

Priscilla A. Green in honor of “CHESTER,” a Mediterranean Donkey

Amy Karaschak in honor of “BILLY,” a Nigerian/Nubian goat
Judith S. Morgenstern in honor of all the llamas cared for at New Bolton Center

In memory of a special animal:

Lolly Clarke in memory of Secret Past “LADD” and “MISSY,” her Welsh Corgi

Mary Jane Coolen in memory of “SUNNY”

Mina and David Crasson in memory of “MARY”

Gary I. Goldberg in memory of beloved “BOORDY”

Judith S. Morgenstern in memory of “SUNSHINE” and “STARBUCK”

Dr. Jonathan Rosenberg in memory of “TOMMY”

Robert Rossman in memory of “CLYDER”

Mr. and Mrs. John C. Sargent in memory of “DIXIE”

Monica S. Willett in memory of “AERO”

Jeanne Zakrewski in memory of “DAISY”

A gift was made to the Jon Palmer’s Research Fund by:

Unionville Equine Associates in memory of “DYNA VAN DANCE” a.k.a. “VINNY”

A gift was made to Field Service by:

Mrs. Doris Boucher Ritter

A gift was made to the Tamworth Fund by:

George Elser in honor of his father, Henry Elser, and his brother, Andy Elser, V.M.D.

A gift was made to the Ginnie Lieblein Memorial Scholarship Fund by:

Walter C. Wells in memory of Ginnie Lieblein, V.M.D.

A gift was made to the Dr. M. Lynn Sammons Award in Bovine Medicine by:

Dairy Management Consultants in memory of Dr. M. Lynn Sammons ■

President's Message

In my first President's Message of 2005, I think it is only fair to recap the past year's milestones. The events listed below are not in order of occurrence or importance.

1. Alumni met the Landeau Challenge—a great accomplishment in both generosity and participation.
2. The AVMA Annual Convention was held in Philadelphia, with a significant imprint from Penn and unprecedented interaction with our alumni.
3. Alumni Weekend was moved from the spring to the fall with good success and acceptance.
4. Following a *Salmonella* outbreak, New Bolton Center was closed for nearly four months as faculty and staff worked tirelessly in the "Great Scrub."
5. New Bolton Center reopened with new biosecurity protocols that can serve as a model for the profession.
6. **Ralph L. Brinster, V'60**, achieved a great accomplishment in veterinary research: he and his colleagues identified the growth factors essential to allowing spermatogonial stem cells to exist in culture indefinitely.



**James V. Stewart, V'68, President,
Veterinary Medical Alumni Society**

7. A groundbreaking ceremony, followed by a dinner with Nobel Laureate Dr. James Watson, marked the beginning of construction of the new Teaching and Research Building.
8. **Gus Aguirre, V'68**, returned to Penn from Cornell. (This is important because he is the best ophthalmic researcher in veterinary medicine—and he is my classmate!)
9. It was officially acknowledged that our interns and residents have alumni status. Their contact information is being collected to bring them closer to Penn.
10. **Dr. Alan Kelly**, after 12 extraordinary years as dean, announced that he was stepping down on October 1, 2005.

As important as the first nine milestones, the last one is monumental! I have very positive feelings for Dr. Kelly, which are shared by most alumni.

As dean, Dr. Kelly faced many challenges including managing a \$100-million enterprise named Penn Veterinary Medicine. He was a tireless fundraiser, and he did not allow the School to become a second-rate institution by resting on its laurels. Dr. Kelly challenged the faculty and staff to be forward-looking by asking them "Where should the School be?"

The School's priorities include the new Teaching and Research Building, a new Radiation Therapy and Imaging Center at the Matthew J. Ryan Veterinary Hospital, and a new large-animal hospital at New Bolton Center. In the meantime, the Scott Equine Sports Medicine Building

at New Bolton Center opened, the Special Species Clinic at the Ryan Hospital continues to enjoy a large caseload, digital radiography is now available at the George D. Widener Hospital for Large Animals, and hemodialysis is offered at the Ryan Hospital.

Throughout his tenure, Dr. Kelly emphasized the importance of both basic and clinical research at the School, and bridging the gap between the two. According to him, the advancements in clinical veterinary medicine have resulted "from scientists working at the lab bench on fundamental questions of biology to astute clinicians recognizing patterns of disease among their many cases."

In addition, Dr. Kelly has worked hard to keep the cost of a Penn Veterinary Medicine education as low as possible. Due to his leadership, the Commonwealth of Pennsylvania dramatically increased its annual appropriation to the School during his tenure. As a result, the cost of tuition and fees for Pennsylvania residents has risen only six percent over the past ten years. In contrast, over the same time period at Penn, the School of Medicine increased its tuition by 45 percent, undergraduate tuition increased by 47 percent, and the School of Dental Medicine increased its tuition by 48 percent.

Dr. Kelly leaves us a remarkable legacy of consideration, congeniality, inclusion, and brilliant fiscal management. With your support between now and October 1, we will recognize and applaud his many contributions to our alma mater and the profession.

—James V. Stewart

2005 Alumni Award of Merit Nominations Sought

Nominations are being sought for three recipients of the 2005 Alumni Award of Merit, which will be presented at the Veterinary Medical Alumni Society (VMAS) Annual Meeting during Alumni Weekend 2005 on October 1 at New Bolton Center.

The VMAS honors alumni who have made outstanding contributions to their profession and the School with the Alumni Award of Merit. The award is given annually to recognize distinguished graduates for their contributions that advance knowledge in biomedicine, promote the welfare of animals through public education of animal owners,

and benefit society through civic activities that foster the advancement of the profession and the School's good name.

Eligible 2005 recipients are members of the classes that end in "0" or "5," and who will be celebrating a five-year reunion during Alumni Weekend 2005. Members of the VMAS Executive Board will select the recipients from the pool of nominees. Nominations are due no later than May 31, 2005.

For more information or if you have any questions, please contact Mark A. Stuart, Assistant Dean for Development and Alumni

Relations, at (215) 898-1482 or via e-mail at <msuart@vet.upenn.edu>. For a list of previous Alumni Award of Merit recipients, please visit <<http://alumni.vet.upenn.edu/alumniawardofmerit.html>>.

To make a nomination, please send a letter of explanation to:

Mark A. Stuart
Assistant Dean for Development and
Alumni Relations
University of Pennsylvania
School of Veterinary Medicine
3800 Spruce Street
Philadelphia, PA 19104-6047

Unveiling a Six-Legged Equine Assassin: Mare Reproductive Loss Syndrome

by Joan Capuzzi Giresi, C'86 V'98

It was Derby week and all was supposed to be festive in Kentucky. But not so in 2001: Scores of future racers, still *in utero*, were dying mysteriously. And **Lenn R. Harrison, V'67**, director of the Livestock Disease Diagnostic Center at the University of Kentucky College of Agriculture, was left scratching his head.

"We weren't coming up with any diagnosis," Harrison remembers. "It was a real 'What is it?' situation."

The problem became evident one sad April day when the center—which normally posts two or three aborted fetuses daily—received a staggering 35. Many more would follow. In fact, over the next three years, Mare Reproductive Loss Syndrome (MRLS), characterized by early fetal loss, late-term abortion, and foals born weak and dying, would cause thousands of mares to abort.

Except for spotty cases of pneumonia, the fetuses had no telltale lesions. The mares generally remained healthy—even foaling normally the following season. A number of cases of unilateral uveitis, pericarditis, and encephalitis were seen in nonpregnant stables.

Harrison considered several etiologies for MRLS, but quickly ruled out leading contenders like fescue toxicity—a major cause of late-spring equine fetal losses in Kentucky—caused by mycotoxins and cyanide.

Suspecting an infectious agent was at work, neighboring states considered closing their borders to horse shipments. Harrison met with the Kentucky governor and fielded calls from the FBI and the Justice Department about the possibility of contagion associated with agriterrorism.

But infectious etiology was also shelved early on: MRLS was hardly limited to the Thoroughbred industry of central Kentucky. At its far reaches, the epidemic—which afflicted 17 breeds—extended to remote farms in the eastern mountains of Kentucky that had no contact with Lexington's Thoroughbred farms. And bacteria cultured from the fetuses, which included two rare strains of *Streptococcus* and *Actinobacillus*, were considered symbiotic organisms.

But as Harrison walked the affected farms of Lexington (where some 10,000 Thoroughbred mares foal each season) and elsewhere, there was something he could not dismiss.

"The caterpillars were piled so thick you could hardly step on the ground. Even in the food buckets, they were inches high," says Harrison.

Kentucky was experiencing an eruption of the eastern tent caterpillar, *Malacosoma americanum*—an event that occurs every decade or two. The idea that caterpillars could somehow produce fetal losses, however, was considered "wild" by many, Harrison recalls.

Yet in exposure studies that soon followed, pregnant mares housed with the caterpillars aborted within days. Just how the caterpillars, which build their large, tented nests in the wild cherry and ornamental crab apple trees common on horse farms in the area, cause fetal harm is not known for sure.

Harrison and his colleagues theorize that the caterpillars produce a biotoxin deadly to the developing fetus. Others believe the fetus becomes infected with bacteria that enter the mare's bloodstream via tissue penetration of septic barbed setae—or hairs—of ingested caterpillars.

The MRLS outbreak peaked the following year, 2001, to about 3,400 cases. By spring 2002, when the evidence was pointing toward the eastern tent caterpillar as the causal agent, many farms began cutting down their cherry and crab apple trees, and spraying insecticides.

Nevertheless, by the time the epidemic ran its course, some 4,000 mares had aborted, and economic losses had reached about \$500 million. The emotional impact was also severe.

"I'll never forget the expressions on the faces of horse farmers walking in with an aborted fetus and then going back to their farm only to return soon after with another fetus and then another," says Harrison, who was called to perform necropsies around the clock during the disease outbreak.

After completing a pre-veterinary curriculum at Pennsylvania State University, Harrison began veterinary school. While at Penn, he worked in the genetics lab of **Dr. Donald Patterson**, professor of medical genetics, collecting samples.

Following graduation, Harrison returned to Penn State for a general residency. There, he sharpened his teeth in large-animal work and refined his surgical technique. Next, he moved to nearby Mifflin County to start a mixed-animal practice with a concentration in equine and bovine medicine.

But after just a few years, he developed a severe allergy to *Staphylococcus* that forced him to seek a career change.



Lenn R. Harrison

Photo by Matt Burton/University of Kentucky College of Agriculture

Harrison soon learned of a job opening in the veterinary diagnostics lab at the University of Georgia. Although his pathology experience was limited, he landed the position. Working side-by-side with board-certified pathologists, Harrison took—and passed—his pathology boards in 1981.

Although he missed private practice, Harrison found that being on the other side of the diagnostics fence held a special appeal: It was an opportunity to assist veterinarians in the field to do their jobs.

"I get to find unexplained reasons for why animals are sick that can't be learned any other way," he says.

In 1991, Harrison, a lifelong horse enthusiast, took the helm at the University of Kentucky's veterinary diagnostic center. One of two veterinary labs in Kentucky, it processes 60,000 accessions annually, about 60 percent of them equine.

As Harrison reflects back on MRLS, the most widespread epidemic he has dealt with in his career, he talks about ways to prevent—or at least foresee—Mother Nature's next one-two punch. His latest initiative is introducing epidemiology into his lab.

"I have a strong feeling that epidemiology within a diagnostic lab can recognize disease trends like nothing else," says Harrison, who recently hired an epidemiologist to work alongside him and his staff of veterinary pathologists, microbiologists, and a virologist.

Perhaps Kentucky's horses will now be better protected against the next slew of caterpillars or moldy pasture or virulence. ■

Alumni Weekend 2004

On Saturday, October 2, more than 250 alumni and their guests made the connection with Penn Veterinary Medicine during Alumni Weekend 2004 at New Bolton Center. Along with the Alumni Picnic and a variety of family activities during the day, more than 100 alumni and their guests attended a reception and dinner at The Stone Barn in Kennett Square, Pa.

Save the date of Saturday, October 1, for Alumni Weekend 2005 and reunions for classes ending in "0" and "5" at New Bolton Center! This year's Alumni Weekend will be very special as it will be held on the final day of Dr. Alan Kelly's tenure as dean. ■



Dr. Kenneth Drobatz (center), professor of critical care and director of the Emergency Service in the Department of Clinical Studies—Philadelphia, the recipient of the 2004 Excellence in Teaching Award, with James V. Stewart, V'68, Veterinary Medical Alumni Society President, and Dean Alan M. Kelly. The VMAS presents this annual award to an educator recommended by recent graduates.



Class of 1979 (25th reunion): Standing—Howard M. Eisenberg, Meryl P. Lessinger-Bely, William S. Corbett, Donald P. Mullen, Michael S. Miller, and John E. Brockett. Sitting—Cynthia C. Coppock, J. Terrence McGrath, and Joan Regan.



Class of 1944 (clockwise): Richard C. Guise, Marguerite Brielman Gulick, Joseph M. O'Neal, Kenneth E. Diehl, Nancy W. Riser, Martin O. Kaplan



Participants in a carriage drive sponsored by An Evening in Old Philadelphia, a group that raises funds for New Bolton Center, stopped for lunch during the Alumni Picnic.



Class of 1944 (60th reunion): Joseph M. O'Neal, Kenneth E. Diehl, Richard C. Guise, Grant C. Sheckler, and Sheldon S. Farber.



Class of 1989 (15th reunion): Paula M. Colletti, Daniel Mark Brehm, Mary French Crisman, Jonathan Scott Bramson, Lauren Elizabeth Lane, Ronald Joseph Lane, and Regina M. Turner.



The day's activities included a science show presented by The Franklin Institute Science Museum.



Class of 1974 (30th reunion): H. James Schroll, Jane Sparacino Schroll, Leslie A. Dierauf, and Raymond L. Ewing, Jr.



Class of 1969 (35th reunion): Mark E. Haskins, Theresa Magnano DiGiulio, Fred B. Hooper, Jeffrey A. Wortman, and D. Ray Hostetter.



Photography by Addison Garry.

Class of 1994 (10th reunion): Back Row—Thomas S. Osborne, Stephen P. Euler, Robert Jay Markowitz, and Steven P. Cudia. Front Row—Lisa K. Stegman, Arthur J. Jankowski, Kristin Thompson Jankowski, Lisa R. Knox with son, Will, Van William Knox IV, Nancy Ng-Gray, Elizabeth K. Henry, Natasha L. Kassell, and Christine Smith Burns.



In honor of the 50th reunion of the Class of 1954, Robert C. Dreisbach, V'54, (center) donated a watercolor of a mare and her foal painted by George N. Wade, Jr., V'43. With Dr. Dreisbach are Robert D. Flowers, V'54, and Dean Kelly.



Class of 1954 (50th reunion): Back Row—Ramsay S. Buchanan, William M. Adams, Jr., John G. Emerson, Robert D. Flowers, and Robert C. Dreisbach. Front Row—Leroy Manlove, Edgar R. Marookian, Fred D. Hagerty, Doris Sell Emerson, John R. Mohler, W. Richard Thompson, and David A. Meirs II.



Class of 1984 (20th reunion): Back Row—Laura Goodman Madara, Laurie J. Landeau, and Alice S. Weiss. Front Row—Rosilend A. Lawson, Curnen L. Crisman, Neil S. Lipman, Joseph A. Scott, Jr., Andrea J. Leof-Davidson, Kenneth W. Volk, Jr., and Margarita Vazquez Volk



Hayrides were offered to the New Bolton Center pumpkin patch, where children picked their own pumpkins to take home.



Class of 1999 (5th reunion): Robert W. Stewart, Jr., Shannon D. Shank, Janet M. Triplett, Suzanne Shalet, Christine Polaneczky, and Anna Marie Lange.

Class Notes

1952

During the Pennsylvania Veterinary Medical Association's (PVMA) Annual Meeting in October 2004, **Fred R. Guenther, Jr.** received a Lifetime Achievement Award in recognition and appreciation of his many years of dedicated service to the veterinary profession and organized veterinary medicine as a compassionate practitioner, exemplary mentor, and devoted leader. Dr. Guenther has been actively involved with organized veterinary medicine at the local and state levels as a past president of both the Bucks-Montgomery and Pennsylvania veterinary medical associations.

1965

During the PVMA's Annual Meeting in October 2004, **Lester C. Griel, Jr.** was honored with a Lifetime Achievement Award. He was presented the award in recognition and appreciation of his many years of dedicated service to the veterinary profession and students as a compassionate practitioner, accomplished scholar, outstanding teacher, and committed mentor. Dr. Griel has served on the faculty at Pennsylvania State University since 1978 and as a professor of veterinary medicine since 1990. He has mentored many students over his career, which spans over two decades, and is an active researcher in reproductive physiology and diseases.

1968

H. Wesley Towers, Jr., the state veterinarian of Delaware, was a member of a trade delegation that visited Taiwan in November 2004. Dr. Towers met with officials of Taiwan's Bureau of Animal and Plant Health Inspection and Quarantine in the wake of a February 2004 outbreak of avian influenza in Delaware poultry. He assured them of the health and safety of Delaware poultry as well as of the disease-surveillance measures to prevent the virus from spreading again. Many countries had banned poultry exports from Delaware following the outbreak.

Three Alumni Join Banfield

Banfield, The Pet Hospital, has announced the recent hiring of three alumni at its veterinary hospitals: **Charles Dunn, V'96**, practicing in Wilmington, Del.; **Erika K. Lilja, V'00**, practicing in Niles, Ill.; and **Allen R. Shoey, V'62**, practicing in Towson, Md.

1971

Marc A. Rosenberg has recently been appointed to the New Jersey State Board of Veterinary Medical Examiners. The Board oversees the licensure and supervision of the practice of veterinary medicine in the state. Dr. Rosenberg is the director of the Voorhees Veterinary Center. He is a past president of the South Jersey Veterinary Medical Association, and has hosted both radio and TV shows instructing pet owners on the proper care of their pets.

1973

J. Lawrence Dunn, the staff veterinarian at Mystic Aquarium & Institute for Exploration in Mystic, Conn., was featured in *The Day* of New London, Conn., on November 30, 2004. According to the article, he has secured an almost \$600,000 grant to study a recently discovered bacterial disease that affects both marine mammals and humans. Dr. Dunn, who has served as the aquarium's staff veterinarian since 1973, has provided aquatic-animal health consultant services to nearly 30 public and private aquariums and federal and state government agencies. He has also held numerous national and international posts relating to marine mammal medicine and has given hundreds of presentations on the subject of aquatic-animal disease and medicine.

1975

Sally Oblas Walshaw, director of Animal Resources and associate professor at the Atlantic Veterinary College at the University of Prince Edward Island, is president-elect of the Canadian Association for Laboratory Animal Medicine.

1976

Scott E. Palmer, owner of New Jersey Equine Clinic in Clarksburg, N.J., is the new president of the American Association of Equine Practitioners. According to Dr. Palmer in the February 1, 2005 issue of the *Journal of the American Veterinary Medical Association*, "My personal goal as president is to support the health and welfare of the horse in a global community by increasing educational opportunities for veterinarians, technicians, and horse owners around the world."

1977

Charlotte Miller Keenan visited Penn Veterinary Medicine and spoke to students in December 2004 as part of the Dean's Alumni Career Speaker Series. Dr. Keenan is a director

in pathology at GlaxoSmithKline in King of Prussia, Pa. She is responsible for pathology evaluation as well as project management within Safety Assessment.

1978

Donald E. Hoenig, the state veterinarian of Maine, was recently elected to the office of third vice president of the United States Animal Health Association. The nation's animal health forum for over a century, the Association's prime objective is to prevent, control, and eliminate livestock diseases in the United States.

1983

Mark W. Logan was recently reappointed to the New Jersey Board of Veterinary Medical Examiners for a second three-year term, and serves as president of the Board. **Christopher P. Laffoon** is also a member of the Board, serving in his first term.

1989

Daniel G. Kenney, head of the large animal clinic at the Ontario Veterinary College at the University of Guelph, is a new member of the American Association of Equine Practitioners board of directors.

1992

Patricia M. Hogan visited Penn Veterinary Medicine and spoke to students in November

PVMA Led by Penn Alumni

The 2005 Slate of Officers of the Pennsylvania Veterinary Medical Association consists solely of Penn alumni. The officers who serve on the 2005 Executive Committee are:

Timothy J. Ireland, V'90, President

David R. Wolfgang, V'82, President-Elect

Joan C. Hendricks, V'79, Vice-President

Lawrence J. Gerson, V'75, Secretary-Treasurer

Gregory W. Godon, V'73, AVMA Delegate

In addition, **Mark B. Guise, V'82**, was elected to serve as the AVMA Alternate Delegate. During his year as Immediate Past President, **Michael R. Moyer, V'90**, will continue to serve on the Executive Committee in an advisory capacity.

2004 as part of the Dean's Alumni Career Speaker Series. Dr. Hogan is an equine surgeon at the New Jersey Equine Clinic in Clarksburg, N.J. Her presentation was covered by *The Daily Pennsylvanian*, Penn's student newspaper. Read the article, "Vet, Alum Saves Kentucky Derby Champion Smarty Jones' Vision," online at <www.dailypennsylvanian.com/vnews/display.v/ART/419afb7d00c5>.

1993

Mark T. Donaldson has recently left Penn Veterinary Medicine to practice at Unionville Equine Associates in Oxford, Pa.

Alumni Connections

To find a former classmate and to sign up for a permanent e-mail forwarding service:

Join the University of Pennsylvania Alumni On-Line Community for free at <www.alumniconnections.com/olc/pub/UPN>. After you register, you can search the On-Line Directory, which is a great resource for personal and professional networking and an easy way to keep up-to-date on fellow alumni. You can also sign up for a permanent e-mail forwarding service, which will forward messages received at your permanent Penn address to the e-mail address of your choice.

To update your alumni record:

You can update your record via the University of Pennsylvania Alumni On-Line Community On-Line Directory. You may also contact Elizabeth McNamara at (215) 746-7461 or via e-mail at <emcnamar@vet.upenn.edu>.

To make a gift or for information to support Penn Veterinary Medicine:

Make a gift with your credit card through a secure online transaction at <www.upenn.edu/gifts>. For information on supporting the School, visit the Alumni & Friends website at <<http://alumni.vet.upenn.edu>> or call (215) 898-1480.

To request a transcript, certification of graduation, or replacement diploma:

For information on requesting a transcript, visit the Office of the University Registrar's website at <www.upenn.edu/registrar/transcripts.html> or call (215) 898-7511. For information on requesting a certification of graduation, which does not require a tran-

1995

Ellen M. Dziedzicki and her husband, Nathan Pownall, are proud to announce the birth of their son, Alexander James Pownall, on October 2, 2004. Dr. Dziedzicki is currently working in a mixed-animal practice in Warriors Mark, Pa.

1998

During the PVMA's Annual Meeting in October 2004, **Thomas N. Garg** was the recipient of a President's Award. He was recognized for his many hours of time, energy, and innovation dedicated to the creation of a new PVMA membership database and membership directory. Dr.

script, contact the School's Office of Student & Curricular Affairs at (215) 898-3525 or via e-mail at <student-affairs@vet.upenn.edu>. For information on ordering a replacement diploma, visit the Office of the Secretary's website at <www.upenn.edu/secretary/diplomas/#replace>.

To post/search employment opportunities for veterinarians:

Visit the School's Veterinary Employment Database at <www.vet.upenn.edu/jobsearch>.

To purchase veterinary, medical, and allied health textbooks from leading publishers:

Visit the Penn Vet Bookstore at <www.vet.upenn.edu/studentaffairs/bookstore>. A percentage of purchases is returned to the School in the form of scholarship funding to deserving veterinary students.

To obtain a Penn Alumni Card:

The Penn Alumni Card offers a myriad of benefits, including access to the Penn Libraries (does not include borrowing privileges or access to online resources) and discounts on admission to the Morris Arboretum, Class of 1923 Ice Rink, and University of Pennsylvania Museum. The charge for the card, which is valid for 10 years, is only \$20. For more information, visit <www.upenn.edu/penncard/card/obtain_alumni.html>. Please address any correspondence to:

Office of Development, Alumni Relations, and Communication
University of Pennsylvania
School of Veterinary Medicine
3800 Spruce Street
Philadelphia, PA 19104-6047

Garg practices emergency and critical care as an associate veterinarian at the Veterinary Referral Center in Frazer, Pa.

2001

Teresa Davenport is a new associate veterinarian at the Animal Medical Center in Collegeville, Pa. Dr. Davenport is engaged to David Crowder, who is a vice president with the Judge Group, Inc. in West Conshohocken, Pa. They are currently building a new home, and are planning a December 2006 wedding.

Residents

2003

During the American College of Veterinary Surgeons (ACVS) Veterinary Symposium in October 2004, **Beth Kraus**, a lecturer in surgery at New Bolton Center, won the award for the best clinical paper in *Veterinary Surgery*, the official journal of the ACVS.

2004

Florien A. Jenner, an assistant clinical professor of large-animal surgery at the University of Minnesota College of Veterinary Medicine, won the second-place award for best poster at the ACVS Veterinary Symposium in October 2004.

Deaths

1940

Robert C. Gaul on October 8, 2004.
Martin M. Kaplan on October 16, 2004.
Donald B. Craig on April 25, 2002.

1941

Carl R. Babe on October 24, 2004.

1945

Samuel Abramson on September 1, 2004.
Frank S. Entwisle on January 14, 2005.

1953

Earl G. Blackburn on December 25, 2004.

1955

Orville G. Lewis, Jr. on November 25, 2001.

1956

Wesley Guy Pietz on December 5, 2004.

1957

Edward H. Devine on December 15, 2004.

1970

Michael A. Glatt on December 10, 2004.

2004 Alumni Award of Merit Recipients

During the Annual Meeting of the Veterinary Medical Alumni Society (VMAS) of the University of Pennsylvania School of Veterinary Medicine on October 2, 2004, the following three alumni were honored with a 2004 Alumni Award of Merit.

Dr. Ronald L. Genovese, a 1964 graduate. A resident of Solon, Ohio, he is president of Randall Veterinary Hospital in Warrensville Heights, Ohio. He was honored for his significant impact on the development and training of equine practitioners.

Dr. Norman D. Heidelbaugh, a 1954 graduate. A resident of College Station, Texas, he is professor emeritus of Veterinary Anatomy and Public Health at the Texas A&M University College of Veterinary Medicine. He was recognized for his more than 20 years of service to our nation as a veterinary officer in the United States Air Force.

Dr. Max J. Herman, a 1959 graduate. A resident of Collegeville, Pa., he was honored for serving since 1996 as president of the Eastern Veterinary Historical Society, which showcases the rich heritage of veterinary medicine and promotes public awareness of the profession.

The VMAS honors alumni who have made outstanding contributions to their profession and the School with the Alumni Award of Merit. The award is given annually to recognize distinguished graduates for their contributions that advance knowledge in biomedicine, promote the welfare of animals through public education of animal owners, and benefit society through civic activities that foster the advancement of the profession and the School's good name. ■

More than 100 alumni and friends celebrated Penn Veterinary Medicine in New England at a reception last November at the New England Aquarium in Boston. The reception was hosted by E. Scott Weber, V'97, the Aquarium's head veterinarian. Guests enjoyed a behind-the-scenes tour, a sea lion presentation, and a dive show from the top of the Aquarium's 200,000-gallon Giant Ocean Tank. Pictured are Jeffrey DiPaola, C'80 V'86, and Virginia T. Rentko, V'87, and their children, Douglas and Nicholas.



Photo by Meghan Moore/megpic.com

Obituaries

Martin M. Kaplan, V'40, 89, a virologist, international public health official, and humanitarian, died of cancer on Oct. 16, 2004, in Geneva, Switzerland.

Dr. Kaplan was an authority on the transmission of certain diseases from animals to humans, including rabies and influenza. For many years, he was an official of the World Health Organization, where he was chief of veterinary public health and later chief of medical research, promotion, and development. It was here that Dr. Kaplan helped develop a safer rabies vaccine.

He continued doing research and was part of a team at the Wistar Institute in Philadelphia that in the 1960s and 1970s developed new rabies vaccines for humans and animals.

In the late 1950s, Dr. Kaplan joined the Pugwash movement, which was named for the Nova Scotia village that was the site of the first conference in 1957. Pugwash, along with its founder, Joseph Rotblat, was awarded the Nobel Peace Prize in 1995. As the organization's secretary general from 1976 to 1988, Dr. Kaplan worked for nuclear, chemical, and biological disarmament.

Dr. Kaplan was also an amateur cellist. He is survived by his wife, Lenna Bouchal; a daughter, Alexa Intrator; sons Peter and Jeffrey; and four grandchildren.

Amy M. Bogdanoff, 32, special events coordinator at the School of Veterinary Medicine, died suddenly on Dec. 9, 2004.

Ms. Bogdanoff joined the Veterinary School in 1999 as an administrative assistant in the Section of Medical Genetics. In 2001, she joined the School's Office of Development, Alumni Relations, and Communication in the newly created position of special events coordinator. Ms. Bogdanoff managed the School's Penn Annual Conference, one of the largest conferences for veterinarians and veterinary technicians held in the eastern United States. In addition to organizing many gatherings for the School's alumni and friends, including Alumni Weekend and Parents and Partners Day, she planned the dedication and renaming ceremony for the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania and the groundbreaking ceremony for the School's Teaching and Research Building.

Ms. Bogdanoff served the University community as a former secretary of the Weekly Paid Professional Staff Assembly and as a volunteer coordinator for Penn's Way. She received a B.A. in Communication in 1993 and a M.A. in Public Relations in 2003, both



Amy Bogdanoff with brother Aron and dog Abby.

at Rowan University.

She is survived by her parents, Bruce Bogdanoff and Sue Levine; a brother, Aron Bogdanoff; and a sister, Ellie Levine. Contributions in her memory may be made to Beth Israel Congregation, High and Warner Sts., Woodbury, N.J. 08096 or the American Cancer Society, 1851 Old Cuthbert Blvd., Cherry Hill, N.J. 08034.



A modern-day Ben Franklin joins Suzanne J. Smith, V'82, and Dean Alan M. Kelly at the National Constitution Center.

The Huidekoper Reception



Michael R. Moyer, V'90, Monica Moyer, Christine Connelly (Chair, School's Board of Overseers), and Anne Cole.



Gail K. Smith, V'74, Margaret Gerhard, and Charles Raker, V'42, share a laugh before dinner.

Opportunity Scholarship students joined their sponsors at the 2004 Rush Shippin Huidekoper Dinner held in November at the National Constitution Center in Philadelphia. Pictured are, from left to right, Kay Kim, V'08, Andrew H. Elser, V'87, William Gilson, V'08, Denae Bordeaux, V'08, Kevin Wray, V'08, and Olivia Shroeder, V'08. Since its inception in 1998, the Opportunity Scholarship Program has awarded more than eighty \$10,000 scholarships, as well as one-on-one mentoring, to entering first-year vet students.



Upcoming Events

March 2005

10-11

2005 Penn Annual Conference

New Location!

Wyndham Philadelphia at Franklin Plaza
Philadelphia, Pa.

For information, visit <<http://alumni.vet.upenn.edu/pennannualconference.html>>.

10

2:00-4:00 p.m.

Veterinary Medical Alumni Society Executive Board Meeting at 2005 Penn Annual Conference

May 2005

13

2:30-3:45 p.m.

Penn Alumni Weekend 2005

Classes Without Quizzes Presentation

"9/11 Search-and-Rescue Dogs and
Handlers Health Update"

Rosenthal Building, Room 321

3800 Spruce Street

They wowed us all with their tenacity and courage. Three years later, the health and psychological well-being of the 9/11 search-and-rescue dogs and their handlers continue to be the focus of a special research project at Penn. Dr. Cynthia M. Otto, associate professor of critical care in the School of Veterinary Medicine, and Dr. Melissa G. Hunt, G'90, GR'96, associate professor of psychology, will share what the research has revealed to date and discuss the study's future direction.

11

2:00-4:00 p.m.

Veterinary Medical Alumni Society Executive Board Meeting New Bolton Center

16

Penn Veterinary Medicine Class of 2005 Commencement

For information, visit

<www.upenn.edu/commencement>.

July 2005

17

6:30-8:30 p.m.

Alumni Reception

American Veterinary Medical Association Annual Convention

Hilton Minneapolis

Minneapolis, Minn.

October 2005

1

Alumni Weekend 2005/ Reunions for Classes Ending in "0" and "5"

New Bolton Center

Kennett Square, Pa.

Important Phone Numbers

Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania

24-Hour Emergency Service (215) 898-4685

Specialist Clinic Appointments (215) 898-4680

George D. Widener Hospital for Large Animals at New Bolton Center

24-Hour Emergency Service and

Specialist Clinic Appointments (610) 444-5800

Penn Veterinary Medicine

General Information (215) 898-5438

Dean's Office (215) 898-0600

Development and

Alumni Relations (215) 898-1480

Student Admissions (215) 898-5434

Student and Curricular Affairs (215) 898-3525

Wait—There's even more *Bellwether* online!

Visit the *Bellwether* website and you'll find more articles, including:

Penn Vets Keep Watch on Chronic Wasting Disease

A neurological disorder in deer and elk, similar to mad cow disease, has been reported in the United States and Canada. Read how Penn veterinarians are partnering with government experts to thwart its spread into Pennsylvania.

The Aftermath: Dealing with the Grieving Process

The death of a pet can often be more painful than the loss of a friend or family member. Social worker Jodi Levine runs a support group at the Matthew J. Ryan Hospital to help pet owners deal with the grief of losing of an animal.

Field of Dreams

Read about the trials—and joys—of food-animal veterinarian James T. Shissler, V'04, both as a student and a recent graduate.

Scholarships

A listing of support received by Penn Veterinary Medicine's outstanding students from individuals, corporations, and private organizations.

This entire issue—as well as past issues—can be found at: www.vet.upenn.edu/newsandevents/bellwether/

Visit the School's website at www.vet.upenn.edu



Penn
Veterinary Medicine

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